



THE ECONOMY AND LIVELIHOODS OF THE EARLY CHRISTIAN MONASTERIES IN PALESTINE

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MASTER OF ARTS THESIS
NOVEMBER 2003

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Cover illustration: The Byzantine Monastic Centre of St. Aaron at Jabal Harûn near Petra,
Jordan (Nina Heiska)

"A considerable quantity of rubbish had been thrown over the wall of the monastery [St. Catherine's monastery in Sinai], and we were hoping that some information might be obtained by digging over the pile. One day was enough, however, to show that there would be nothing, for the earth was moist right through the underlying rock, owing to the melting snow, which saturates the soil. Anything like papyrus or parchment must be destroyed. Besides, the rubbish pile was very small, and I found that everything had for generations been put into the garden."

C. T. Currelly, 1906

1 SUBJECT AND METHODOLOGY OF THE STUDY¹

1.1 SUBJECT DEFINITION

When we think of early Christian monasticism, our thoughts are easily dominated by images of later, mediaeval Catholic and Orthodox monasteries, which are more familiar to us. Yet when monasticism emerged at the early stages of Christianity, there were no preconceived ideas or forms on how to run such an establishment. Gradually, through successes and failures, unintended and planned actions, monastic institution, as we know it, emerged. Therefore, the evidence concerning monasteries should be evaluated with an open mind, as I have been attempting to do since 1998. It was the year when the Finnish Jabal Harûn Project began uncovering the remains of a Byzantine building complex – most probably a monastery – on a high plateau in the eastern edge of the Wadi Araba valley in Petra, Jordan. During its' heyday, the inhabitants of this complex supported life in semi-arid, desert conditions. How was it possible? It would seem strange if everything had been imported to the site in the past as our excavation group does now. Food and other

¹ This MA thesis has been carried out within the framework of the research centre "Ancient and Medieval Greek Documents, Archives and Libraries" at the University of Helsinki which is part of the "Centres of Excellence in Research" programme of the Academy of Finland.

important raw material sources should be available nearby, when communication and transport is onerous. These questions about the self-support and interaction with the surrounding society led me to contemplate the economy and livelihoods of similar communities as well. Monasticism was born on ideological grounds, but as the size and number of the communities increased, the monks were forced to think about practical matters, such as how to support themselves and how to use the possible surplus according to Christian ideology. Literary sources indicate that monks were also involved in secular affairs as real property owners, vendors, and buyers.

Hence, the goal of this work is to understand the evolution of the economy and livelihoods of the early Christian monasteries in Palestine and Arabia from the fourth to the seventh centuries AD in their own cultural and environmental settings, using both written and archaeological information. The former emphasises the modest and severe lifestyle of the monks, whereas the latter brings to light the rich material remains, which testify that the monks or groups of monks did acquire wealth. The wealth was apparently used for the good of the community (e.g. construction of monastic buildings) or for the benefit of others (e.g. charity). The questions I will ask in my work are: what kinds of livelihoods were available for the monks? What part did agriculture play in the monastic economy? What was the significance of pilgrimage to monasteries? And lastly, how were the monastic funds used?

This research covers the time period from AD 324 to the AD 636/640, which is known as the Byzantine period in the Levant (Watson 2001: 461). In the fourth century, the coenobitic monasticism emerged and grew to become a permanent element in the society. The end date is in a way chosen artificially, as the Muslim conquest did not necessarily change the life of Christian communities immediately. Instead of rapid destruction, a more gradual change occurred (Schick 1995: 223) and initially, many monasteries continued their existence under the new rule (Schick

1995: 96–100). These centuries were also culturally a transitional period from the Roman era to the Byzantine period and from polytheism to Christianity, and thus researchers refer to these years by various terms such as Late Roman (approx. AD 300–500) or Early Christian periods.

After this brief introduction, I will describe the previous work done on the subject and the methodology used in this work. The purpose of chapters 2 and 3 is to present some of the medium term and long-term processes, which prevailed during the period of this study in Palestine. Then, I will present and analyse the archaeological and written sources, monastic wealth sources and expenditures in chapters 4–9. The conclusions will be presented in chapters 10 and 11.

1.2 PREVIOUS RESEARCH ON THE SUBJECT

Avi-Yonah's (1958) study on the economy of Byzantine Palestine has been used as basic reference for the economy of the region. According to him, the prosperity of Byzantine Palestine, its churches and monasteries, was based on foreign capital flowing into the region, subsequent to its new role as the Holy Land. To support his theory he provides many references about the donations received by the church and the monasteries. Although scholars have generally accepted Avi-Yonah's view, increasing material evidence and new theories of the nature of the economy in antiquity have undermined its validity. For instance, Kuhnen has demonstrated the importance of agriculture and cattle breeding in the Carmel region and their expansion and strong specialisation in late antiquity. He doubts whether foreign capital would have had caused such an expansion in an agrarian society. (Kuhnen 1994: 39–50.) Also Kingsley questions Avi-Yonah's theory and states that Avi-Yonah failed to understand the importance of the region's agriculture as the basis of its economy, leaving the reader with an impression that all the wealth came into the region from outside (Kingsley 2001: 44).

One of the most extensive studies solely dedicated to economic affairs of monasteries is William Zeisel's dissertation 'An economic survey of the early Byzantine church' (1975), with one chapter devoted to monastic economy. Despite the promising title, Zeisel's discussion on coenobitic monasticism refers mainly to its Egyptian version, and it relies predominantly on written data. Not surprisingly, he finds the data elsewhere too scarce to draw any major conclusions. I find it also problematic that he states how the monasteries were isolated from ecclesiastical and secular worlds. It certainly seems to have been the impression of many early Christian writers, but may not have been the reality.

Hirschfeld's (1992) groundbreaking study on Judaeen desert monasteries gives the reader an intricately detailed view on the monastic livelihoods in the Judaeen desert near Jerusalem. The work is based on years of field survey and several excavations in the region with more than 70 monasteries. Since its publication, this book has become a major reference source on the monastic life. From the economic point of view, the major problem of this study is the extensive use of ancient writings – particularly concerning diet and livelihood – as facts. Hirschfeld then uses the mostly structural and artefactual evidence mainly to confirm the historical data. Another problem is the regional character of this study: though numerous, all these monasteries were located in a small area, approx. 90 by 25 km near Jerusalem, where the holy status of the city guaranteed a steady flow of pilgrims.

Patlagean (1977) thoroughly studied the lifestyle and material conditions of the poor during the early Byzantine period throughout the Roman East, from Asia Minor to Egypt in 'Pauvreté économique et pauvreté social à Byzance, 4e – 7e siècles'. One of her main subjects is the monastic life, because monks at least in theory lived like the poor, even though in their case poverty was chosen voluntarily. Her work provides a good historical background on the society, even though the author states

that her investigation in the matter has been regrettably superficial. Her sources are mainly literary, but archaeological data are used as well.

Economic aspects are also briefly referred to in other studies, such as D. Chitty's 'The Desert a City' (1966), which is an excellent guide to the political and ecclesiastical aspects of the Egyptian and Palestinian monasticism, A. H. M. Jones's 'The Later Roman Empire. Vol. II' (1964), E. D. Hunt's 'Holy Land Pilgrimage in the Later Roman Empire, AD 312–460' (1982), John Binns' 'Ascetics and Ambassadors of Christ. The Monasteries of Palestine, 314–631' (1994), and J. Patrich's 'Sabas, Leader of Palestinian Monasticism' (1995). The Egyptian church and monastic economies are presented in works such as Ewa Wipszycka's 'Les ressources et les activités économiques des églises en Égypte du IV^e au VIII^e siècle' (1972) and 'Études sur le christianisme dans l'Égypte de l'antiquité tardive' (1996), Roger Bagnall's 'Egypt in Late Antiquity' (1993), and James Goehring's 'Ascetics, Society, and the Desert' (1999). The Syrian monasteries and their economy have been discussed for example in G. Tchalenko's 'Villages antiques de la Syrie du Nord' (1953 Vol. I), A. Vööbus's 'History of Asceticism in the Syrian Orient' (1960 Vol. II), J. Villeneuve's 'L'économie rurale et la vie des campagnes dans les Hauran antique (I^{er} siècle avant J.-C. – VI^e siècle après J. C.)' (1985) and in the study of I. Peña *et al.*: 'Les cénobites syriens' (1983).

In conclusion, I have not found any modern study that is exclusively dedicated to the monastic economy. Besides, the research is rather biased, as it is to a large extent based on written sources. Furthermore, the views vary as well: A. H. M. Jones states that by the fifth century, labour (e.g. all housework, gardening, wine making, copying of books) was rare in the eastern monasteries, as they were so well endowed (Jones 1964: 932). It is also argued that the monasteries were only minor landowners before the end of the ninth century after which they started receiving generous imperial donations (Talbot 1991: 1392). Hence, it appears that our understanding of early Christian monastic economy is still inadequate and confused.

1.3 METHODOLOGY

Methodologically, my research approach follows a branch of the French *Annales* school of social and economic history. In 1949, Fernand Braudel published a study '*La Méditerranée et le monde méditerranéen à l'époque de Philip II*', in which he introduced a tripartite temporal system for the purpose of presenting a balanced study of time, space and social reality in the past. Braudel perceived the past as an entity comprising of different types of structures that operate at different temporal levels. He divided these structures into three categories: the long-term, the medium-term, and the short-term levels, which correspond on a temporal scale to geographical, social, and individual time. Hence, depending on the structure that is studied, it is possible to understand it within the framework of different temporal levels. Using the temporal hierarchy, Braudel succeeded to combine the impact of environment and ecology to social activity, so that environment is not just background noise to human action. (Braudel 1976: 17-22.) Braudel's structural division is presented in table 1.

Table 1: Braudel's model of historical time (Bintliff 1991: 6; slightly modified)

HISTORY OF EVENTS	SHORT TERM– <i>EVENEMENTS</i>	Narrative, Political History; Events; Individuals.
STRUCTURAL HISTORY	MEDIUM TERM– <i>CONJONCTURE</i>	Social, Economic History; Economic, Agrarian, Demographic cycles; History of eras, regions, societies; ideologies.
(STRUCTURAL HISTORY)	LONG TERM– STRUCTURES OF THE <i>LONGUE DURÉE</i>	Geohistory: “enabling and constraining”; History of civilizations, peoples; Stable technologies, world views (<i>Mentalités</i>).

Braudel's long-term level describes “man in his relationship to the environment” (1976: 20). In his later works he also included on this level not only physical geography, but mental frameworks as well. Characteristic to the structures of this level is that all change is slow and unperceivable to individuals and even to human generations. Thus, these structures can be seen as a stable frame of reference

for people. They provide the limits of human activity, but also support them. Braudel considered their impact on human history significant. (1980: 31.) The temporal length of the long-term structures can be measured in thousands of years.

The medium level is that of “social history, the history of groups and groupings”. The structures of this level (conjunctures) include ‘economic systems, states, societies, civilizations...’ (Braudel 1976: 20–21.) These temporal rhythms may last centuries; they advance in slow but perceptible tempo and also bring history nearer to individuals than the long-term structures (1976: 353). Braudel also further refines the temporal division by classifying two different categories of medium level structures. First group includes the shorter economic conjunctures like ‘rates of industrialization, the fluctuations of state finances and wars’. The second group is more geographical by nature as it consists of ‘long-term demographic movements, the changing dimension of states and empires, the presence or absence of social mobility in any given society, the intensity of industrial growth’. (1976: 899–900.) What Braudel leaves out of the analysis at this level are the short-term (less than a decade) crises that might have had repercussions in the long run.

Thirdly, there is the event level of ‘traditional history – history...on the scale not of men, but of individual man...’ (*l’histoire événementielle*). It is characterized by “brief, rapid, nervous fluctuations”. (Braudel 1976: 21.) This level consists of very short-term events, human actions, and Braudel perceived them as being fleeting moments in the larger scale of historical process. Yet they complete the picture created by longer-term structures and so they are essential and concrete data that are needed when the past is interpreted. (1976: 901.)

The result of Braudel’s temporal levels is the intertwining of the events and processes into historical narrative; an approach which has been used in archaeology as well (e.g., Knapp 1992; Cherry *et al.* 1991). The specific definition of structures and their time scale needs to be recognized by each researcher according to the scope and

aim of his/her studies. However, even though the ideas of Braudel provide valid tools for understanding the relationship between events and structures, some modifications to his theories are needed. The determinism of the long-term structures, such as geology and environment, should be downplayed. For even though they define certain physical limits to human action, they do not necessarily dictate human behaviour. In fact, contrary to Braudel's beliefs, man and his actions can cause even long-term alterations, such as environmental changes. Therefore, it is important to see the role of the human agency in a dynamic network of structures and processes, which interact with each other. (McGlade 1999: 146–147.)

In my work, monastic economy is seen as part of a medium-term structure – monasticism, which itself is a part of long-term structure – Christian ideology. Its evolution will be followed from a dynamic perspective diachronically from its birth to the Islamic conquest of the area in AD 634–640. “Dynamic” in this case refers to possible changes that took place over the centuries, with regard to sources of income and the administration of wealth. As a result, monasticism and monastic economy are perceived as continuously changing phenomena. The origin of changes may have been internal (e.g. evolution of the Church as an institution or some local factors affecting single monasteries) or external, when the changes were caused by the changes in the society or in the environment.

In other words, the economy and livelihoods of monasteries cannot be evaluated on their own, but they need to be seen in a socio-historical and environmental frame of reference. Therefore, I have included introductions to the economy of the time-period, as it is perceived today, as well as the ideologies of early monasticism and some of the environmental factors that I consider significant. Other medium-term parameters in this study include factors such as the supposed location of settlements adjacent to monasteries, land use, location of market places, and dietary restrictions.

Table 2: Braudel's model applied on the monasteries of Byzantine Palestine

SHORT TERM	Individual events like foundation of a monastery, laws, church politics, individual acts and material phenomena concerning the monasteries etc. = data derived from archaeological and textual material
MEDIUM TERM	Economic structures of the monasteries, pilgrimage, economic trends of the era, exchange, political systems, communication
LONG TERM	Climate, topography, vegetation, general food production and agricultural technologies, Christianity

On the practical level, the analysis of the sources will be conducted by dividing the data on a temporal scale between different time-periods. The time unit I have chosen is a century, for a preview of the material has shown that much of the material has been dated with a precision of a century, and therefore a more accurate division does not seem to be practical. Furthermore, if possible, the material is divided into categories of income and expenditure, which both have specified sub-categories such as donations and food supplies. In the end, I will examine the development of the monastic economy and its changes century by century. As such, an evolutionary view of the monastic economy will be presented, with its changes and the reasons for these within the socio-environmental frame of reference. Due to the small amount of material, no meaningful statistical analysis of the material is feasible.

2 SOCIO–ECONOMIC BACKGROUND

2.1 LATE ANTIQUE ECONOMIC LANDSCAPE IN THE EASTERN MEDITERRANEAN

The Late Roman state had significant control over the economic life in antiquity through the direct administration of the financial affairs. The imperial administration was a complex affair, which was divided into three separate departments. Each department in turn had independent administrative systems, treasury, and staff. The emperor had his own private property (i. g. *res privata*), while the public funds were controlled by the *comes sacrae largitiones* and by the praetorian prefects. The importance and specific tasks of the departments changed during the late antiquity, but we are not cognisant of all the details of these changes. It is known however, that the emperors occasionally used the public funds as their own. (Jones 1964: 411–462.)

The State funded its activities with taxes, which were during Late Antiquity paid or at least measured in cash. (Jones 1964: 431–432, 462–469.) Due to the tax system and abundant coin finds, Banaji argues that by the 5th century the economy in the eastern Mediterranean was based on gold and there were in fact large amounts of gold in circulation (2001: 60, 123, table 6). Furthermore, the use of money was not restricted to the elite, but the gold *solidus*¹ and other metal coinage were in mass circulation and their use penetrated even the lower parts of the society, such as the monks.

The Late Antique economy was based on agriculture. The large urban centres were capable of sustaining a great number of non-agricultural trades and industries,

¹ A gold coin that was struck from the early fourth to the eleventh century. In the fourth century one Byzantine pound (*litra*) was divided into 72 solidi. The usual theoretical weight of the solidi used by numismatics is 4.55 g thus making the pound 327.60 g, but evidently the the weight of the pound and solidus fluctuated slightly throughout the centuries. For further information, see C. Entwistle 2002. Byzantine Weights. In A. E. Laiou (Ed). The Economic History of Byzantium. Dumbarton Oaks Studies, 39. Also available at: <http://www.doaks.org/EconHist/EHB25.pdf>.

but the cities and towns could not have existed without the produce and revenues of their hinterlands. (Banaji 2001: 6.) In addition to towns, private citizens, religious and other corporations and the state itself were also significant landowners. In fact, in the eastern part of the empire the state probably controlled large blocks of lands, which it had acquired by the annexation of former independent kingdoms. These lands were mostly leased out to private tenants, who were granted perpetual leases in increasing numbers. Long-term leases were favoured, because many short-term lessees exhausted the lands and left them in derelict condition to gain larger profits. The rent was paid annually in one or three instalments and it was paid in gold or sometimes in silver. (Jones 1964: 417–422.)

Other livelihoods beside agriculture ranged from trade and retail to manufacturing of products such as textiles, glass, and metal ware. These products were bartered or traded in the market places provided by villages and towns. Furthermore, there were also travelling salesmen, who conducted local or interregional trade. Long-distance commerce beyond the borders of the empire was strictly controlled and was largely dependent on the state as a consumer. (Jones 1964: 824–872.)

Recent archaeological research has shed light on livelihoods in different regions of Byzantine Palestine (Appendix 1). Hirschfeld reports that the area of modern Israel appears to have been covered with diverse types of small and large farms, farming villages, towns, and several cities. In fact, over 80% of the population may have lived in the rural areas. (Hirschfeld 1997: 33–71.) The principal livelihoods of the villagers were farming (grain, vegetables, grapes, and olives) and animal husbandry (sheep, cattle). More specialised trades included fish farming, textile, pottery and glass production, and copper and lead mining (1997: 60–61). Trade was conducted, according to the rabbinic sources, in private dwellings and travelling salesmen conducted the trade between settlements. In addition, archaeological

investigations confirm the complete absence of open market places and rows of shops in the villages. (1997: 63–64.)

In Hauran, a basalt region in the southern part of modern Syria and northern Jordan, the settlement pattern is characterised by unfortified villages of different sizes, military settlements and monasteries. The absence of villa-type settlements is noticeable (Villeneuve 1985: 113–115; MacAdam 1994: 57). The climate of the plateau created favourable conditions for growing wine, fruit trees, olives and grains. The Byzantine remains – threshing floors and fields outside almost every village and monastery – confirm the extensive cultivation of grains on the plain. Every village has also grain mills, but they are difficult to date and prove only the consumption of cereals. Animal husbandry, bovines in particular, is indicated by the local architecture, in which part of the ground floor was sectioned off for animals. So far, there is no indication whether the bovines were used for the production of milk or meat or as draft animals. In the mountainous area of Hauran, the remains of presses demonstrate that the base of the agriculture was probably the cultivation of wine. Here the olive is mostly absent, because the winter frost makes olive growing precarious. (Villeneuve 1985.)

Northwestern Jordan comprised fertile farming land, which most probably was incorporated to the areas of the six major urban centres: Gerasa, Gadara, Pella, Abila, Hippos, and Dium. Some of the places have biblical associations, which might have been one of the reasons for attracting monastic presence and pilgrimage to the region. (MacAdam 1994: 68–70.) Central Jordan consists also of lush agricultural areas, which supported the existence of large urban centres such as Philadelphia/Amman. Domestic and wild livestock export is also probable in view of the earlier Hellenistic traditions of the region. (1994: 79–80.) It appears that the environmental conditions in northern and central Jordan were favourable for the cultivation of vine, olive, and cereals, which were the most important crops of the era. In contrast, the area of southern Jordan was semi-arid and thus provided less

favourable settings for agriculture. Yet there are indications that significant areas were occupied during the Byzantine period. The development of these settlements is not yet understood, for there are mixed signs of expansion and decay. (Schick 1995: 154.)

All in all, many regions of Byzantine Palestine show clear signs of growth: expansion of urban centres and increased building activities (Walmsley 1996: 147–151), cultivation of new lands (Villeneuve 1985), and population growth (Dauphin 1998: I, 79). The cultivation of plants and animal husbandry appear to have been the main basis for the growth and increasing wealth. This economic prosperity created excellent financial circumstances for the construction of new monasteries and for the extension of the old ones as well.

2.2 EARLY CHRISTIAN MONASTICISM

Asceticism – the renunciation of bodily pleasures and physical withdrawal from the society – became very early on a part of the Christian life. Apparently, the first ascetics lived at home until some urban ascetics left their homes and lived a life of voluntary poverty on the streets of the cities. In the third century, we have the earliest evidence of Christians retreating into inhabited regions in Syria and Egypt to live a solitary ascetic life. By renouncing the world, the early monks and nuns also protested against the Church, which at this point had already begun amassing property. (Stewart, C. 2000: 346–357.)

However, even if the early ascetics wished to live their life in seclusion, they were always part of the secular world as well. Willingly or unwillingly, they were also involved in the political life of the Roman Empire (Bowersock, Brown and Grabar 1999: 584). The power of the monastic movement can be discerned from the literary and archaeological evidence, which also show how monasticism strongly expanded during the fifth century, seeming to reach its peak between AD 450–550

(Patlagean 1977: 325–327). It was, however, only at the beginning of the sixth century that Christianity became a truly dominating force in the Palestinian society. The extant written sources of the period are mostly ecclesiastical in context, and thus often give a wrong impression of the era: polytheistic religions were still strongly present in the society and Christianity spread only gradually. (Bowersock 1997: 8).

In the study of monastic livelihoods, it is important to know how the communities were internally organised. A basic division of monasteries into two types can be proposed according to the lifestyle of the monks and to the differences in the physical structure of the monasteries. Hence, the basic community types are the hermitage and the *coenobium*, a communal monastery. The former is a loosely knit community of anchorites (i. g. solitary monks), who live separately in caves or in huts, but occasionally gather together for a church service, a common meal, or to get new supplies. In the Judaeen Desert near Jerusalem, hermit communities were called *laurae*. According to Hirschfeld, every *laura* had at least two common buildings, namely a church and a bakery. Otherwise the physical evidence a *laura* leaves behind is scarce because the anchorites could live many kilometres apart from each other and, consequently, all the cells can be found scattered around in a wide area. However, a *laura* could also have common storage rooms, stables, a hospice or other buildings normally connected to a communal monastery, but these were not necessary parts of it. A *laura* was never surrounded by a wall. (Hirschfeld 1992: 18–20.)

The latter type, the *coenobium*, was a community of monks, who followed a strict daily routine living, praying, working, and eating together. These communities would usually have enclosing walls around a series of buildings and in general they often resembled a late Roman agricultural villa. (Hirschfeld 1992: 33.) The other architectural elements of a *coenobium* may, for instance have included churches, chapels, burial places, prayer rooms, refectories and kitchens, storage rooms, hospices, inner and outer gatehouse, water systems, walls, courtyards, towers, cells,

and stables. The size of the community may have varied from a small monastery of some tens of monks to huge complex comprising hundreds, even a thousand monks. Such large monasteries could be found, for example, in Egypt, where the Pachomian communities developed into large, agricultural and industrial communities (Stewart 2000: 346–357). In Palestine, the size of the monastic sites and the literary sources suggest smaller *coenobia*, such as Khirbet ed-Deir, which, according to Hirschfeld, may have supported about 50 monks (Hirschfeld 1999: 161–162).

The division of monasteries into categories can be done according to their economic base as well. First, there was a community of craftsmen, who supported themselves by producing basketry and other types of handicrafts. *Laurae* and the other hermit communities are a good example of this type of economic units. Secondly, some monasteries became agricultural production centres. Thirdly, monasteries could have provided services for the sick, poor and travellers (e.g. maintaining hospitals and distributing food). According to Patlagean, there is no clear temporal division between the economic types nor did one follow another. First monks probably made their living as craftsmen, but later all the above-mentioned means of living coexisted even in a single monastery. (Patlagean 1977: 318–322.)

In addition to the types of the monasteries, a relevant issue in the study of the monastic economy is the financial control over the communal property. As monasticism was born as a protest movement against the society and the growing wealth of the church, the first monasteries were independent communities and the monks were financially responsible only to themselves. However, as landowners they needed, at least theoretically, to pay taxes to the state. It should be noted that the monks were laymen and at first they did not share the privileges, such as tax exemptions of the clergy (Gaudemet 1959: 199–200). Gradually monasticism became a respected part of the Church, which founded monastic communities under the control of its clergy and tried to gain control of the earlier foundations as well (Council of Chalcedon, Canon 4).

3 ENVIRONMENTAL CONSTRAINTS

The study area covers roughly the territories of modern Israel, Jordan, southern Syria and Sinai in Egypt, where the Roman provinces of *Palaestina Prima*, *Palaestina Secunda*, *Palaestina Tertia* and *Arabia* were located in late antiquity (Appendix 1). In this study these regions will be commonly referred to as Palestine or Holy Land. Geographically Palestine is limited by the Mediterranean on the west and by the Red Sea on the south. The elevations of Lebanon and Anti-Lebanon create a natural physical border to Palestine in the north, and a desert plateau limits the area in the east. The region's main features are the coastal plain in the west, the low foothills to the east of it, and the central mountain area (up to 800 m) further eastwards, two large deserts – the Negev and Sinai – in the south, the mainly limestone Transjordanian plateau east of the Jordan Valley, the basalt fields of Hauran to the north of the plateau in southern Syria and the Wadi Araba – Dead Sea Depression, which incorporates the Sea of Galilee, the Jordan Valley, the Dead Sea, and Wadi 'Araba. (Appendix 2.)

Hence the geographical area of this study is large and contains diverse environmental zones. The past and present vegetation zones of Palestine include woodlands, shrubberies, salines, swamps and different types of deserts (Zohary 1982: 28). (Appendix 3.) In the following subchapters I will briefly describe the most significant environmental factors for this study. It should be noted that the environmental information is mostly based on the present situation. Studies of the paleoenvironment have been conducted regionally, but there still are many unknown factors, and no general consensus of it has been reached.

3.1 CLIMATE

The present climate of the region can be divided into four categories from the perspective of the plant life: Mediterranean, Irano-Turanian, Saharan, and Sudanian (Appendix 4). The Mediterranean climate can be described as humid and sub-humid with the mean annual rainfall between 350 to 1000 mm. Usually the summers are humid and hot and the winters short and mild. The climatic conditions make these lands suitable for dry-farming; in suitable soils the wheat, barley, olive, and vine are thriving. The semi-arid Irano-Turanian climate is characterised by low precipitation, by extreme ranges in daily and yearly temperatures, and by hot and dry summers and cold, harsh winters (Zohary 1973: 87). These regions have a mean annual rainfall between 150 to 350 mm. The natural water conditions make these lands suitable for pasture and occasional farming. (Zohary 1982: 26–27.) Nevertheless, meticulous water collecting methods allow continuous farming in these regions as well, as was demonstrated by Hirschfeld in the Judaeen desert (1999: 91–94). The dominant features in the Saharo-Arabian region are a short and mild winter and a long, dry summer. The mean average rainfall varies between 0 mm and 100 mm, and rainless years are also recurrent. The soils of this region do not develop well, nevertheless they are capable of supporting plants. (Zohary 1973: 93–94.) In Palestine the Sudanian climate prevails in hot, barren deserts, where the wadis support savanna-like vegetation such as different species of acacia (Zohary 1973: 240, 248–252). These areas are characterised by infrequent rains and long rainless periods (Zohary 1982: 27). The above mentioned plant/climate regions are separated from one another by belts, where plants species of both regions coexist. Furthermore, plants may grow under special conditions far away from their native environs. (Zohary 1973: 85–86.)

It is still argued, whether there has been a climatic change in the Middle East (or in the Eastern Mediterranean) during the Byzantine period. It seems that the evidence is not conclusive in either way, but according to Beaumont, it seems likely that human activity has caused changes at least to some extent. (Beaumont *et al.* 1976:

79–80.) In a study conducted in the Negev and northern Sinai, Goldberg reached no conclusive evidence on anthropogenic causes on erosion in the Byzantine period. The climate could have been wetter, but more information is needed to support such a hypothesis. (Goldberg 1986: 240–241.) Rubin evaluates the information of several studies and concludes that the climate was as arid as presently in the desert of Negev in South Israel. (Rubin 1989: 71–78) On the other hand, Niemi and Smith postulate that there might have been more seasonal rainfall in the nearby Wadi Araba valley. In the southern part of valley, the climate was still dominantly arid. Presently the mean annual precipitation in the area is less than 50 mm/year, which makes it a marginal area for human habitation. However, during the Byzantine period there was a marked increase of sites, which does suggest cooler or wetter climate. (1999: 811–818.) MacDonald as well postulates that wetter climate may have been the main reason for increase of settlements in the area of present day Jordan during the Byzantine period (2001: 599). Hence, no consensus about the long-term characteristics or changes of the ancient climate has been reached so far.

However, the effect of smaller changes in the climate should not be forgotten either. Significant short-term fluctuations in the region are caused by drought, insufficient rainfall, and frost. They are not necessarily repeated in archaeological data, but might have had great importance when they occurred. For instance, if olive trees are destroyed, the recovery of the olive oil production can take tens of years. (Greene 1986: 84–85.) At Elusa in the Negev, a severe drought or maybe a larger climatic change was recorded at the beginning of the sixth century. Procopius of Gaza, a contemporary author, describes in a letter the effect of the winds and sand on vines, which were either badly damaged or destroyed. (Mayerson 1983: 252.) In a similar way Cyril of Scythopolis mentions several droughts affecting the lives of the monks in the Judaeian Desert (*V. Sab.* 66–67, *V. Euth.* 25; 44).

3.2 WATER RESOURCES

Due to evaporation and to the fact that water comes usually in high amounts during short time periods, the water resources of the area are very limited. Most of the rain water runs in wadis (i.g. dry river beds) (Beaumont *et al.*: 80–84), and in perennial streams, Jordan River in particular (Bender 1974: 181–182). The wadis and rivers to the west of the central mountain area drain to the Mediterranean, while the eastern wadis and perennial currents act as latitudinal tributaries feeding the longitudinal Dead Sea Depression from the east and the west. The wadis east of the Transjordanian plateau empty into the Syrian and Arabian deserts. (Zohary 1973:8–9.) (Appendix 5)

It must be noted that the changes in precipitation may occur in directly adjacent geographical areas. For instance, the climate of Wadi Faynan in Jordan is arid whereas only a few hours away on a nearby plateau the annual rainfall is more than 200 mm (Barker *et al.* 1997: 21). In the highlands, some part of the precipitation falls as snow. Thus, the effect of the water is delayed until spring, when the snow melts and sometimes large quantities of water are released as floods. (Beaumont *et al.* 1976: 64–72.)

Rainwater was collected to cisterns and water reservoirs, which were sometimes built to store water for several years. A system of water channels and conduits led the water to these installations. Rainwater was also collected in wider areas to irrigate fields and gardens. Dams and the elaborate terraces, which control the water flow in the slopes and at the riverbeds, were built in the wadis. (Hirschfeld 1992: 148–161.) If only rainwater was used to obtain household water, the water storage facilities should have been built to hold more than the yearly need. The reserves were needed because of the re-occurring droughts.

Another possible, though limited water source in Palestine is groundwater. However, it is difficult to estimate the use of it (Bender 1985: 182–186 for Jordan)

during the research period. So far I have seen no references to the use of groundwater in monastic sites, but wells have been found near the Byzantine settlements of Avdat, Mamphis, Rehovot, Nessana and Elusa in the Negev (Tsuk 2002: 65).

3.3 COMMUNICATIONS

Communications in the context of this work signify a network of natural and built roads for commerce, travel, exchange of ideas, and interaction. This kind of network is never stagnant, because the use and importance of routes changes frequently depending on political and economical factors. Nevertheless, the Romans preferred sea and river routes to roads as they were economically viable compared to land transportation (Greene 1986: 17–35). In Palestine, however, the exploitation of inland water routes was probably minimal, because of the small amount of perennial streams. The major waters, such as the Jordan River, Sea of Galilee and the Dead Sea could have been utilised throughout the year and the latter in particular offers a significant shortcut between the provinces of Arabia and the three Palestines. Beside inland water traffic, seafaring provided an option to the land routes on the long Palestinian coastline, which is also the location of major port cities and towns. In addition to long distance voyages, cabotage, which enabled people to choose between sea and land route between two coastal sites, was common (Greene 1986: 29).

Hence, within the limits of Palestine land routes were often the only connection between different locations. The region was covered by at least 3700 km of Roman roads, most of which were also in use during the Byzantine period. (Roll 1999.) Beside built roads, paths and trails criss-crossed the terrain even in the deserts. For instance, a wide network of footpaths connected adjacent monasteries in the Judaeian desert to each other. Monks, their visitors, and pilgrims, for whom the trails

gave protection in the difficult desert terrain, frequented the paths. (Hirschfeld 1992: 205-212.)

The Romans built the roads to gain more effective control of their regions and to have dependable means of communication throughout the year. For the government they secured the transportation and maintenance of military units during wartime, while in peacetime they served officials of the Imperial administration (Roll 1999.) The local population used the roads for travelling and for the transportation of goods. Starting from the fourth century, also an increasing amount of pilgrims travelled the roads, approaching Palestine from all directions. Way stations, hostels, churches, and even monasteries were founded beside the pilgrimage routes to service the needs of the travellers. Some of these travellers documented the services, holy sites and distances between locations in travel itineraries for the use of fellow pilgrims. (Hunt 1982: 50-58.)

Thus, it would seem that an effective infrastructure existed to allow long and short distance journeys and conveyance of goods. Furthermore, the ideas of monasticism spread rapidly in this network, which also offered means of living for the monks dwelling near the routes.

4 WRITTEN SOURCES

Written sources together with a few still active monasteries were a long time the main direct evidence in the study of early Christian monasticism in Palestine. In the context of this work, significant written sources are legislation, Church Canons, building and funerary inscriptions, hagiographic literature, and documents. These sources will be briefly introduced below. Other writings of the period such as the works of Church and general historians, Church Fathers and pilgrims will be referred to if they pertain to the livelihoods of the monks.

Text critical problems are inherently connected to the use of written sources, but I have passed these problems without mention, and merely relied on the editors' and translators' interpretations. I have also used the content of the texts at face value, because the references to the livelihoods and other economic activities of the monks are usually written in passing. In reality, the authors had often ulterior motives and today, it is difficult to discern what is mere innocent background description. In particular, it is questionable to trust the large sums of money mentioned in the texts. Therefore I did not try to find all the references to donations in order to sum them up. Such summaries have already been created for instance by Avi-Yonah (1958).

4.1 IMPERIAL LEGISLATION

Imperial legislative texts inform us about the relationship between state, Church and private citizens (Christophilopoulou 1986: 30). Their nature is official and they deal mostly with the affairs of the society's higher levels. Most of them were responses to appeals of the citizens (Garner and Humfress 2001: 62) and thus they include a slightly more personal perspective as well. One of the greatest problems in the interpretation of the Roman law is that in the court of justice the legislation was a

starting point for settling individual cases (Garner and Humfress 2001: 62), and hence we lack information on how the local courts applied them in other cases.

In addition, we have no way of knowing whether the ascetics obeyed the laws. For instance, the monks did not necessarily built dormitoria in the Judaeen Desert coenobia, even though the legislation required that in the sixth century. The system of separate cells inside and outside the monastic enclosure and dormitoria rather seem to have coexisted there. (Hirschfeld 1992: 177.)

The most important sources for this work are the Theodosian Code, which was issued in 438 by Theodosius II, and *Corpus Iuris Civilis*, which was compiled between 528 and 534 by the order of Justinian I. Both of these collections are based on previous Roman laws and are thus attempts to harmonise the vast array of existing law codes. The Imperial laws show how the monastic ideal was in many ways already formed by the 6th century. The state attempted to control the increasing number of monasteries, because they were centres of theological battles that tore apart the state and the church. (Gerostergios 1982: 168–175.) Some laws deal especially with monastic properties and thus are useful in the study of economy.

4.2 PROCEEDINGS AND CANONS OF THE ECUMENICAL AND LOCAL COUNCILS

The Church Councils were meetings of the bishops to settle current theological and practical questions of the church. Therefore, the proceedings of the councils contain information on how the Church co-ordinated the life of its congregations and institutions. Since we often know the names and titles of the participants, we can also deduce information about the Church administration and the location of monasteries (Christophilopoulou 1986: 31–33).

All Christians were supposed to live according to the decisions of the Church Councils. For example, according to the Bible and the councils, Christians were not supposed to take interest on the money and material things they lend. In reality, the

church of Alexandria was involved in various business affairs and it borrowed money at interest as well. (Laiou 1996: 446–446.) In addition, throughout the entire time period strong heterodox movements and doctrinal controversies disturbed the inner peace of the church, and many monasteries were heavily involved in these disputes as well. Our knowledge on how the different monastic communities followed the canons is lacking. Therefore, the ecclesiastic laws may have given guidelines to the monks, but we should not be surprised if they did not follow them.

The relevant Ecumenical Councils in this study are the 1st Council held in Nicea in AD 324, the 2nd in Constantinople in AD 381, the 3rd in Ephesos in AD 431 and the 4th in Chalcedon in AD 451. In addition to Ecumenical Councils, smaller local councils were held to solve doctrinal and heretical issues. Some of the local canons were applied universally and therefore they have a wider geographical effect (Inkinen 1980: 5). These local councils are as follows: Ancyra (AD 314), Neocaesarea (AD 315), Antioch in Encaeniis (AD 341), Gangra (AD 343), Sardica (AD 344), Constantinople (AD 382) and Laodicea (AD 390).

4.3 MONASTIC RULES

The founders of the monastic communities wrote rules to instruct the monks in their daily life. Some regulations have survived from the early monastic period, so we do know quite a lot of how the monks and nuns should have lived. These rules can be divided into three categories, Basilian, Pachomian, and Syrian, and they have all influenced later monasticism, both in the East and the West (Thomas and Constantinides Hero 2001).

Basil of Caesarea (c. 330–379) was one of the most influential early Church Fathers, who was deeply interested in the ascetic lifestyle. His mother, sister, and brother had all become ascetics. He wrote “Longer” and “Shorter” rules as the guidance to the Cappadocian monasteries, but these soon acquired popularity in

Syria and Palestine as well. Basil's Rules have greatly influenced the subsequent Byzantine and western monasticism. (Stewart 2000: 357–358.) Basil clearly stated that the postulants should give away all their property (Saint Basil, Long Rules, ch. 8). He emphasised the importance of manual labour, which was to be done with collectively owned tools (Ibid., ch. 37). Furthermore, monks were not free to sell their products as they liked, for commerce was to be utilitarian in nature. (Ibid., chs. 39–40)

When Basil wrote his Rules, he was already familiar with the Egyptian form of coenobitic asceticism, which was founded by Pachomius (c. 292–346). His rules were based on strict a hierarchy and strong leadership. The model proved to be a success in Egypt and spread rapidly all over the country. (Stewart 2000: 351–352.) In Pachomian foundations, the monks were not permitted to have their own belongings. The importance of manual labour and agriculture were particularly stressed and as its effect, some Pachomian monasteries developed into large industrial centres housing several hundreds of inhabitants. The rules also included a large amount of information on practical issues such as farming and household matters. (Thomas and Constantinides Hero 2001: 32–37.)

In Syria, the monasticism varied more and cannot be defined as clearly as the Basilian and Pachomian traditions. Early Syrian ascetics were solitaries, and the coenobitic monasticism put its roots down in the region much later than in Egypt and in Anatolia. The communities seem to have been of different nature as well. The undated *Canons of Rabbula of Edessa* forbade the monks to possess any animals except a donkey or an ox for sowing. All commercial transactions were also strictly controlled. (Vööbus 1988: 286–289.) This type of rules may have begun the dependency on donations and charity to survive, which was typical for monasteries during the later Byzantine periods. (Thomas and Constantinides Hero 2001: 41.) However, the sixth century *Canons of the Monastery of Mar Mattai* in western Syria depict a different attitude to private possessions. According to these rules, the monks did not give up their belongings upon entering the monastery. Subsequent to their

death, their personal property was distributed within the community. Also the profits gained by the community were distributed among the inhabitants. (Vööbus 1988: 173–175.)

Monks gathered around famous ascetics, and lived according to their instructions. The writings of the Church Fathers, such as Basil of Caesarea had wider influence as well. As a result, the Palestinian monasticism may have included aspects of all of the above-mentioned rules and as such, the monks' attitude to property may have varied considerably both between monasteries and in time.

4.4 BUILDING AND FUNERARY INSCRIPTIONS

Inscriptions are texts incised on stone or other hard material. They may commemorate builders and donators or provide information on the deceased. For example, inscriptions are a valuable source for dating structures and their repairs, and for information on monastic administration, hierarchy and benefactors. (Christophilopoulou 1986: 41 – 45.) In many cases the church mosaic floors had inscriptions containing information on the donor and the construction date. In lack of other written sources, an inscription may be the conclusive evidence in identifying the site as a monastery.

The basic requirement for the use of inscriptions as evidence for a particular site is that they are found *in situ* and in primary context. The lack of proper knowledge of their archaeological context considerably diminishes their usability. (Di Segni 1999a: 150.) Dating inscriptions may be complicated as well. In the East, if the inscription has a date, we need to know which dating system was used, because it varied according to city and period. The chronology of an undated inscription is even more difficult to ascertain as during the later periods inscriptions cannot be as reliably dated using epigraphic and linguistic criteria as during the classical antiquity (Christophilopoulou 1986: 42.)

4.5 HAGIOGRAPHIC LITERATURE

Hagiographic texts are contemporary religious writings, which include Martyrologies, Lives of the Saints, and Encomia, rhetoric summaries of saints and martyrs (Christophilopoulou 1986: 76). In view of the theme of this study, only the Lives of the Saints are used. The main purpose of this literature was to promote the ascetic lifestyle and underline the holiness of holy men, which means that aspects of economic life are not often mentioned or directly discussed. In general, hagiographic texts include details about the lower level of the society in the contrary of most other preserved texts, which reflect the affairs of the aristocracy, state, and the upper hierarchies of the Church.

Even though hagiographic texts are contemporary with the time-period concerned here, it is still difficult to date the events and even verify that these ever occurred. Hagiographic accounts can be described as testimonial evidence: they were verbal or written attestations, which were based on individual experience and observation. The fundamental question concerning them is the reliability of the witness. Therefore, many researches advice caution in their use (Bagnall 1993:294–295, concerning Egypt), while others take them more at face value (Hirschfeld 1992: 3–5). Cyril Mango describes vividly how a saint's life was composed and how it changed through history. According to him, the real person, if he ever existed, was completely obliterated in the hands of the hagiographers, but details of the time-period and the elements of daily life survive to some extent. (1997: 264–266.) Thus, it should be possible to use hagiographic literature as a source of economic history, but still with great caution.

The most important Lives used in this study are listed in the following table:

Table 3. The Lives of the Saints

Source	Date of Composition	Period Covered	Main Monasteries Described
Life of St. Hilary	390	4th	Gaza
Palladius, <i>Historia Lausica</i>	ca. 420	ca. 400	Douka
Cyril of Scythopolis Lives of Euthymius, Sabas, John Hesychast, Cyriac, Theodosius, Theognius, and Abramius	ca. 560	405–557	The Great Laura Nea Laura Euthymius/Khan el-Ahmar Theoctistus/Deir Muqallik Theodosius/Deir Dosi Theognius/Kh. el-Makhrûm
John Moschus, <i>Pratum spirituale</i>	ca. 620	ca. 500–600	Monasteries in the Jordan Valley
Life of George of Choziba	before 634	ca. 560–620	Choziba/Deir Mar Jiryis

4.6 DOCUMENTS

Documents are texts, which are not laws or canons, but have legal implications in daily life. Thus they can effect both public and private sector of the society. Good examples of document are wills and contracts. They were written on diverse materials such as papyrus, parchment, paper, or sometimes even inscribed on stone. (Christophilopoulou 1986: 33.) Documents written on papyri are an invaluable source in the research of Egyptian monasticism (Boughner and Goehring 1990: 456 – 463; Bagnall 1993: 293 – 302).

In the study of Palestinian monasticism two collections of papyri are relevant: the Nessana and the Petra papyri. The former comprises the remains of at least five different archives from the 6th and 7th centuries AD. Some of the documents relate to the monastery of SS. Sergius and Bacchus in Nessana, a town in the desert of Negev. Although it was an urban institution, the information revealed by the papyri is the exceptional source to the life of an early Christian monastery. For instance, there was probably a monastic school in the village, which provides an indication how monasteries became great centres of learning in the Middle Ages. Nessana was also a waystation for travellers and its Christianity was influenced by both Egyptian and Syrian varieties (Kraemer 1958: 15–16).

The Petra papyri were found in a Byzantine church in Petra in 1993. This sixth century family archive contains mainly economic and legal documents illustrating the life in Petra and the neighbouring regions. A document written in AD 573 contains donations to a local hospital and to the Sacred House of our Lord the Saint High Priest Aaron (Frösén 2002: 22). The latter is probably the monastic complex in Jabal Harûn near Petra, which is currently excavated (Frösén *et al.* 1999, 2000 and 2001). The documents include also other references to another monastery and monks (Lehtinen 2000: 95; 137).

5 ARCHAEOLOGICAL SOURCES

Archaeological research in the area of ancient Palestine has a long history. Jacotin, an officer in Napoleon's army in Egypt, conducted the first systematic expedition to the region. The result, a plan in scale 1:1.000.000 covering six regions in Palestine, was published in 1815. As well as geographic information, it included details on archaeological remains in French and in Arabic. Later in the 19th century more than 2000 western travellers and scholars published about 5000 books and articles of the region and thus the investigation of the area was firmly established. (Dauphin 1998: 41–44.) In the 20th century after the end of the British Mandate, the emergent national states have taken care of the research with the help of foreign schools and universities.

Despite the prolific amount of research, the archaeological methods and theoretical frameworks used in the East Mediterranean have lagged behind their western Mediterranean counterparts in many respects (i.e. quantitative studies in pottery and the use of archaeobotany). Therefore, the older studies do not offer much material for an economic analysis of a single site or for inter-regional trade. (Kingsley and Decker 2001: 2.) An economic study is further hindered by the previous preoccupation with Christian religious sites, which leaves the sites floating without the contemporary social context (Kingley 2001: 44–45).

Furthermore, one of the principal problems of the reports is that many finds are reported without contextual information. The information given on formation processes – cultural or natural – is also lacking if not non-existent. Thus details – related to stratigraphy, features, artefacts, and ecofacts – that might help in the economic analysis of the site were either never found, discarded as irrelevant or were simply left out of the reports. As Pasquale Testini writes: "The excavation of the cells of the monastery, which certainly included rooms 320–430, has not yielded any

elements of importance" (Testini 1964: 105). The trustworthiness of some of the older reports should also be kept in mind, because the re-examination of sites has led to the questioning of the old descriptions and interpretations. Such is the case in Umm as-Surab and Sama in Hauran, where the surveyors could not verify the existence of the monasteries reported about 80 years earlier (King 1983: 112; 114; 132–133).

The material of this study comprises Palestinian and Arabian rural coenobia. In some cases the definition rural is doubtful, as on a closer look these monasteries never appear to be far away from settlements. The main evidence originates from the following sites: Mount Nebo/Siyâgha (Saller 1941; Piccirillo and Alliata 1998), Khirbat Siyar el-Ghanam (Corbo 1955), Keniset er-Ra'awat (Corbo 1955, Tsferis 1975), Bir el-Qutt (Corbo 1955), Ramat Rahel (Testini 1962; 1964), Kursi – Gergesa (Tsferis 1983), Tel Masos (Fritz and Kempinski 1983), Khan el-Ahmar (Meimaris 1989; Hirschfeld 1993), Ma'ale Adummin/Khirbet el-Murassas (Magen and Talgam 1990; Magen 1993), Deir 'Ain 'Abata (Politis 1989; 1992; 1993; 1995), Khirbet ed-Deir (Hirschfeld 1999), and Jabal Harûn (Frösén *et al.* 1999; 2000; 2001). (Appendix 6.) The archaeological analysis concentrates on three groups: artefacts, features, and ecofacts, as indicators of subsistence and trade.

5.1 ARTEFACTS

Artefacts are man-made or modified objects made of a single or a combination of materials, such as ceramic, stone, wood, and metals. They can provide important evidence of the site and its activities, but only if the archaeological context of the artefact is known. (Renfrew and Bahn 1996: 45–46.)

Pottery is traditionally used in the studies of ancient economy, as the great bulk of sherds enable statistical analysis and conclusions can be drawn from the nature of the site and its trade. From the economical point of view, the amount and type of pottery may reflect the poverty or affluence of the site. It may also reveal

what kinds of foods were eaten. However, it may be impossible to determine who ate the food that was kept in storage, cooked, or served in the vessel. For example, we cannot be certain whether it was the monks or their guests who consumed specific foodstuffs. In a similar fashion, the provenience of vessels indicates links to the outside world, but leaves open such questions as the nature of the transaction – reciprocity, redistribution, or trade – that brought the vessels to the site.

The role of pottery in the reports used in this study has been mainly in dating and finding the function of the rooms. Therefore, I have not discussed pottery as a separate entity, because I have not been able to compare pottery analyses between sites. The best reports such as the pottery at Mount Nebo (Saller 1941, Bagatti 1985) and at Khirbet ed-Deir present the identified types, but the amounts remain elusive. In many reports, the pottery is described only briefly (Magen 1993: 193–196, Testini 1962: 88–89, Testini 1964: 105–106). As no pottery expert myself, I have not been able to deduce the economic importance of pottery, which have been found in “small amounts” or “large amounts”.

Agricultural tools, such as scythes and other implements reflect the farming, handicraft production, and daily chores occurring at the site. Querns, on the other hand, evidence only the consumption of grains. Whether the grain was produced at the site or nearby requires the supporting data (e.g. fields, harvesting implements). Liturgical vessels, vestments, and books presented another drain in the monastic finances, if the monks needed to buy them or at least their raw materials. On the other hand, they could have been donated to the monastery. Yet the upkeep, like replacing broken objects and clothes, requires funds. Knowledge of their origin presents the same kind of problem as in the case of ceramics and other small finds.

Coins can be seen as a direct indicator of wealth, but in case of the monasteries their small amount or complete absence should not be taken as a sign of poverty. Literal sources indicate that money was stored in a common coffer (*V. Euth.* 48,

69.15–25) which was presumably emptied when the monastery for one reason or another ceased to exist. Some monastic rules also forbade commercial transactions near holy places (Saint Basil, Long Rules 40).

5.2 FEATURES

A feature is a human made or modified non-portable artefact. It may be a combination of artefacts and ecofacts creating a hearth, a floor, or a more complex structure such as a building. (Renfrew and Bahn 1996: 46.) The main features in this study are the monastic buildings, particularly those connected to production, consumption, and storage, but also everything else that can be considered as a source of wealth or that would have needed wealth to exist.

For example, features that may indicate production and consumption are olive and wine presses, fire pits, ovens, pottery kilns, animal folds and shelters, granaries, stables, storerooms, kitchens, threshing floors, vats, and water collecting and storage systems. They do not necessarily reflect the wealth of the community being agricultural and domestic installations, but rather present elements of the daily survival strategy. The possible surplus and donations on the other hand present wealth that may be seen in the size of the monastic ruins, in the materials used and in the quality and quantity of the artefacts. However, it should be taken into account that the buildings were not necessarily built at the same time: the features and other finds may represent several centuries of activities. The provenience of the building materials is not a very reliable indicator of wealth either, as a lot of it could have been reused, as was the habit of the time period (Crowfoot 1941: 102–107). However, the construction of a large, richly decorated monastic church always requires some property.

Signs of economic activities may also be visible outside the monastic complexes. These features include fields, gardens, orchards, storerooms, water

installations, and remains of small industries. The presence of other settlements and roads nearby might reflect the self-sufficiency or dependency of a monastery on the outside world as well as possible trade and pilgrimage routes. However, the association of these features to the monasteries may be difficult to ascertain.

5.3 ECOFACTS

Ecofacts are objects or substances found in a site, which are of natural origin and not purposefully altered for human use, such as the remains of animals, plants, and soils, but which nonetheless provide information on past human activities and the environment. No environmental reconstruction is attempted in this study, but attention is given to the human, plant and animal remains reported from the sites.

The human remains reflect living conditions, diet, and diseases and thus indicate whether the ascetics managed to create adequate living conditions for themselves. Plant and animal remains also indicate the diet, and in some cases, they may help to speculate which plants were cultivated and which animals were bred at the site. In general, these remains reveal information about the food flow in and out of the monastery. Harlow and Smith have conducted an archaeobotanical study in an Egyptian monastery, in which they show how much can be learned from such sources compared to literary evidence and how many discrepancies there are between these two types of sources. The monastic diet seems to have been much more varied than the sources indicate. (2001: 764–765.) In case of the Palestinian monasteries, it will be equally interesting to see the correlation between the written and material sources.

The collection of faunal remains has been reported at the following sites: Deir 'Ain 'Abata (Politis 1992: 284) and Jabal Harûn (Tenhunen 2001: 386–387). Plant remains have been studied at Tel Masos (Liphschitz and Waisel 1983: 208–213), Deir 'Ain 'Abata (Politis 1989:), Shelomi (Dauphin 1993: 47–48) and Jabal Harûn (Studer

2001: 384–386). In several other reports the excavators speculate, on the basis of literal information or ethnographical observations of the present Bedouin population, what possibly was cultivated in the nearby fields and orchards. Reference to skeletal remains was made in connection to several monasteries, such as Khirbet el-Kilya (Magen 1990: 325–327), Ma'ale Adummim (Magen 1993: 178), Deir 'Ain 'Abata (Politis 1995: 480), Tel Masos (Arensburg 1983: 222–224), and Khan el-Ahmar (HersHKovitz *et al.* 1993: 373–385). Only in the case of the two latter locations however, more comprehensive analyses were published and these can be useful for an economical assessment.

6 MONASTIC SUBSISTENCE – ENVIRONMENTAL EXPLOITATION

6.1 MONASTIC DIET AND SUBSISTENCE

Dietary regulations may also have had economic repercussions in the monasteries. Apparently, not all the available food was considered suitable for consumption, because the ancient writers refer to the problematic attitude of the ascetics to nourishment. Food was usually connected to the passions of the flesh (Kislinger 1999: 199) and to extinguish these carnal temptations ascetics should eat raw and cold foods. Body-warming foodstuffs such as wine, meat, and flatulent vegetables were to be avoided (Rousselle 1988: 172–175). Even if the monks obeyed rules, Patlagean finds differences in regional habits of the Byzantine Empire as well. Coastal eating habits were different than these in the interior and likewise there was a difference between towns and countryside. She also states that there is a clear difference between the coenobites and the solitary monks, who often ate much poorer food (1977: 48–49). In practice, the availability of foodstuffs may have played a significant role in the dietary habits of the monks as well.

According to Rousselle, the monks displayed preference for either cooked or raw food. The diet of cooked food was based on a type of a porridge, which was made of boiled lentils, chick-peas, wheat flour and other dried vegetables. The followers of the raw food diet ate bread, fruits, and vegetables, which were eaten raw or soaked in water. (1988: 165–166.) In Palestine, the condemnation of cooked food, however, appears to have been more commonly part of a solitary lifestyle, as hermits may not even have had the utilities to prepare warm food. In a fifth-century anecdote, the anchorites in the Laura of Gerasimus wanted to drink hot drinks and eat cooked foods in their cells. Gerasimus replied that if they wanted these things they should live in a coenobium. (*V. Ger.* 4). Furthermore, the Palestinian monastic founders emphasise the importance of bread in the diet. Thus, we are told that the

monks of the monastery of Theodosius (*Pratum spirituale*, 92) and at Choziba (*V. Geor.* 3.23) baked bread. In the latter monastery, however, the monks gave the majority of the bread to the guests (*V. Geor.* 3.23).

In consequence, it should be noted that there were no common dietary rules for all ascetics during this period, but the communities may have created their own regulations following the food practices of the period. For example, according to the historical sources, the Pachomian monks in Egypt ate a kind of a fish soup made of crushed, small fish (Dembinska 1985: 441), while the Palestinian monks rather considered fish nourishment for the sick (Hirschfeld 1992: 88). Accordingly, the later eastern monastic rules of the tenth to thirteenth centuries testify to the considerable differences in dietary habits between different monasteries (Kislinger 1999: 200).

6.2 AGRICULTURE

6.2.1 Cultivated Lands

According to Cyril of Scythopolis, the monastery of Theoctistus owned fields with the laura of Euthymius. The monks worked the lands together until AD 485, when the fields were divided. (*V. Cyr.* 7.) At the turn of the seventh century, Anthony of Choziba narrates how the monks of Choziba had gardens outside the walls (*V. Geor.* 6.27; *Miracula* 4). Traces of fields and gardens have indeed been found in the vicinity of monasteries. These structures, however, can rarely be dated to the Byzantine period and the neighbouring settlements might have used them as well.

In Khirbet ed-Deir, there seems to be a clear connection between the cultivated areas, ca. 2750 m², and the monastery, as the place is fairly isolated from other settlements. Also, the construction techniques of the water channels and retaining walls support the connection. In addition to this area, Hirschfeld proposes that another 30 000 m² of fields was also cultivated by the monks. The location of these

fields is more distant, but the size and the limiting walls indicate a connection to an organised community. (1999: 93–94.)

At Tell Masos, Fritz and Kempinski postulate that the monks cultivated at least the nearby wadi bed (1983:148). In this case, there were no concomitant settlements nearby. The water resources were estimated to be adequate for farming as well. The three sickles found inside the monastery strengthen their hypothesis of agricultural activities (1983: 141). In Deir Qal'a in Samaria, the agricultural terraces are still visible on the slopes around the monastery. Water was conducted to the plots from cisterns inside the monastery and from a reservoir outside it. (Hirschfeld 2002: 158–164) Hence, farming activities are still visible, but the size of the cultivated area is often difficult to estimate, as can be seen in the following table:

Table 4. The cultivated area of the monasteries and the related agricultural tool finds.

Monastery	Cultivated area/m ²	Farming tools	Source
Deir ash-Sha'ir	Area unknown		Villeneuve 1985: 119
Deir Qal'a	Area unknown		Hirschfeld 2002: 158
Khan el-Ahmar	2 500		Hirschfeld 1993: 359
Khirbet ed-Deir	33 000 (2750 certain)		Hirschfeld 1999: 91–94
Kursi-Gergesa	Area unknown	2 iron sickles, pruning-hook	Tsaferis 1983: 35–36
Ma'ale Adummin	Large?		Magen 1993: 170
Mount Nebo	Area unknown		Saller 1941: 206–207
Shelomi	Area unknown	A scythe, a sickle, a pitchfork	Dauphin 1993: 47–48
Tel Masos	Area unknown	3 sickles	Fritz and Kempinski 1983: 141

6.2.2 Agricultural Terraces and Cisterns

The need for cisterns and water reservoirs is tangibly recounted in the contemporaneous sources. At least twice in the fifth century AD the life of the monks at the monastery of Euthymius was affected by a severe drought (*V. Euth.* 25; 44). Later on in AD 517–520 a four years long drought in the region of Jerusalem caused a famine (*V. Sab.* 67). Being aware of the scarcity of water in the region, in AD 459 Empress Eudocia built a church and a water reservoir for travellers in the Judaeian desert between Jerusalem and Jericho (*V. Euth.* 35). The remains have been identified as the ruins at Qasr 'Ali. Beside the remains there is a monastery, whose monks assisted the travellers. (Hirschfeld 1990a.)

Cisterns have been found both inside the monasteries and near them. Their building technique may define them Byzantine, but often their dating is uncertain and they may have been in use for centuries. The size of cisterns and water reservoirs varies from several thousand cubic meters at Ma'ale Adummin to much smaller constructions and natural cavities in the bedrock. Their connection to agriculture is plausible when their location is near the fields, but also drinking and cleaning water was conducted into the monasteries.

Cisterns needed to store at least the yearly consumption of domestic and agricultural water. The minimum yearly water consumption in the desert is 1,6 m³ per capita (Even-Ari *et al.* 1980: 129–130 as quoted in Tsuk 2002: 77), which means ca. 4,3 liters per day. However, water was also needed for cleaning. The amount of water needed for animals and for the irrigation of plants depends on the number of cattle, and the amount of cultivated area. As such, it is difficult to estimate the total consumption of water in the monasteries. The information about the reported water storing capabilities in monasteries is listed below.

Table 5. The water storing capacity of the monasteries.

Monastery	Inside the monastic enclosure/ m ³	Outside the monastic enclosure/ m ³	Altogether/ m ³	Source
Bir el-Qutt	350	?	350	Corbo 1955: 122.
Deir Dosi			4000	Hirschfeld 1992: 159
Deir Qal'a			4700	Hirschfeld 2002: 159–164
Khan el-Ahmar	290	>3000	>3290	Hirschfeld 1993: 359; Meimaris 1989: 35
Khirbet ed-Deir			> 330	Hirschfeld 1999: 59–90. The capacity of a large cistern close to the refectory and the other central cistern could not be estimated, because they still contained water.
Khirbet Handumah	ca. 200		ca. 200	Sion 1992: 282–283. I calculated the volume from the given dimensions
Khirbet Siyar el-Ghanam	ca. 1300	?	> 1300	Corbo 1955: 44–46. I calculated the volume from the given dimensions.
Ma'ale Adummin	20000–30000		> 20000–30000	Magen 1990: 107–108
Mount Nebo	?	> 1300	> 1300	Saller 1941: 186–207. I calculated the volume from the given dimensions.
Qasr 'Ali	?	875	>875	Hirschfeld 1990a: 289

In the Judaeen Desert, cisterns and water reservoirs have been reported at Qasr el-Yahûd (Hirschfeld 1990b: 35), at Bir el-Qattar (1990b: 38–39), at Khirbet el-Muntâr (1990b: 39–40), at El-Qasrein (1990b: 43–44), at Tel Ghalghala (1990b: 50–52), at Khirbet Umm el-‘Amed (1990b: 63), and in Khirbet et-Tina (1990b: 64). In southern Palestine cisterns and water reservoirs have been reported in Jabal Harûn (Frösén *et al.* 1999: 402) and in Deir ‘Ain ‘Abata (Politis 1989: 229–230).

Beside water supply systems, agricultural terraces and walls are also difficult to date and associate with a monastery. Nevertheless, their construction was for the monks who cultivated land. In Khirbet ed-Deir, Hirschfeld has identified cultivated plots in the nearby wadi bed. The plots were supported by a retaining wall. Further away, 0.5–1 meter wide walls demarcate an additional 20 000-m² field. (Hirschfeld 1999: 91–94.) Still in use today are the well-preserved terraces and walls surrounding the monastery of Deir Qal’a in western Samaria. In the Byzantine period, these fields were irrigated from a water pool with an estimated capacity of 500 m³. (Hirschfeld 2002: 158–163.) The remains of an agricultural system were also discovered in the slopes around the monastery of Deir ‘Ain ‘Abata by the Dead Sea (Politis 1989: 228), near the monastery at El-Qasrein (Hirschfeld 1990b: 44) and at Khan el-Ahmar in the Judaeen Desert. In the latter monastery, stone walls surrounded two of the gardens (Hirschfeld 1993: 359).

The agricultural plots were ordinarily located within or near the monasteries (Hirschfeld 1992: 200), but Cyril of Scythopolis narrates that the monastery of Theoctistus in the Judaeen Desert owned fields approx. 5 km away, near the monastery of Euthymius (*V. Cyr.* 7). In southern Palestine, such an example may be evidenced in Petra, where the Byzantine inhabitants of Jabal Harûn may well have utilised an extensive wadi cultivation system some distance away from the monastery (Lavento and Huotari 2002: 103).

6.2.3 Cultivated Plants

The crops grown in the monastic fields were controlled by environmental restraints (See chapter 3) and probably by dietary regulations (See subchapter 6.1). In Byzantine Palestine the main staples comprised plants cultivated in the fields and gardens. Characteristic plants were cereals, mainly wheat and barley, pulses, vegetables, vine, olive, and date palm (Zohary 1982: 41; Patlagean 1977: 38 for Byzantine period).

The cultivation of wheat requires a minimum of 400-mm yearly rainfall, whereas barley needs a minimum of 200-mm annually (Zohary 1982: 26) and it tolerates higher soil salinity levels (Broshi 1986: 43). Consequently, the cultivation of barley increases in semi-arid regions, even though the people of the period seemed to have a marked preference for wheat. Large amounts of wheat were cultivated in Byzantine Nessana, where the yearly rainfall is 100 mm at present. (Mayerson 1962: 227–230.) However, it seems that the monks of the Judaeen Desert had to buy the grain elsewhere, because the environmental conditions were not suitable for the cultivation of wheat (Hirschfeld 1992: 82–85).

Elsewhere in Palestine and Arabia grain crops were harvested depending on the local conditions as well. At Jabal Harûn, the excavators suggest that the monks substituted wheat for barley, because of the local soil and climatic conditions better suited barley (Tenhunen 2001: 386 – 387). In the nearby Deir 'Ain 'Abata, the excavators found evidence that suggest that the barley and wheat were cultivated in the nearby agricultural terraces (Politis 1989: 231). The monasteries of Hauran may have grown wheat, which was the dominant crop plant in the region (Villeneuve 1985: 121–122). However, the cultivation of grain is securely attested only in the potential monastic site at Shelomi in the Western Galilee, where the inhabitants cultivated wheat and barley (Dauphin 1993: 43–48). Thus far, no reference to the use of rye and oats in the monasteries has been made, even though the cultivation of both of the species is conceivable in the area (Zohary 1973: 624–625).

Olive oil was also a significant source of nourishment and fuel (Broshi 1986: 44) and it was often served to visitors (Hirschfeld 1992:88). The olive grows in different climatic zones ranging from Mediterranean to arid areas; the adaptability is mostly due to numerous varieties of the tree. It also thrives on several different types of soils, even on barren lands. Its main threats are droughts, for the minimum annual rainfall required by the cultivated olive is 150 mm. In areas of 400–600 mm of annual rainfall, dry farming is also possible. The temperature is another limiting factor for the olive, because it weakly adapts to cold, requiring an annual average temperature between 16 to 22°C. (Mattingly 1996: 214–215.) Despite these presently known environmental constraints, the material remains show that olive was also grown in more arid environment, and the modern experiments confirm this (Mattingly 1996: 237–238).

The grapevine is even more adapted to the environmental conditions than the olive. It can tolerate severe winter frosts reaching to –18°C. The best crops are obtained in regions with dry warm summers and cool winters. (Frankel 1999: 35.) In consequence, vine can be grown higher up in mountainous areas than olive. However, wine was a controversial foodstuff among monks. For example, Abba Theodore strictly prohibited its consumption in the sixth century (*Pratum spirituale* 162). In contrast, Sabas and other monks drank wine at the monastic guesthouse in Jericho (*V. Sab.* 46). Similarly, the monks at Choziba and at the Monastery of Abba Martyrius (Ma'ale Adummin) in the Judaeen Desert drank wine with their meals, sometimes even to excess (*V. Geor.* 3.14, 6.27; *V. Euth.* 50). Hence Hirschfeld postulates that in the Judaeen Desert wine was available to monks and only the greatest ascetics refrained from drinking it (Hirschfeld 1992: 88). Wine was also needed in the Eucharistic service on Sundays and on other holy days of the year.

Despite the references to wine and oil consumption, the details of their production in the Palestinian and Arabian monasteries are less well known. According to Jerome, the early fourth century hermits in the region of Gaza

cultivated vine and helped each other during the harvest time (Jer., V. Hil. 26–27). Large-scale olive oil and wine production is well attested in two coenobia, Khirbet Siyar el-Ghanam and Bir el-Qutt, near Bethlehem. The former had a large press both inside and outside the monastic enclosure (Corbo 1955: 36–38; 47–49) and storerooms in underground caves, where a great number of amphorae fragments were found (Ibid., 43, 49–50). The presses were in use at least in the sixth century (Ibid., 56). The sixth-century monastery at Bir el-Qutt is located north of Khirbet Siyar el-Ghanam (Ibid., 113, 130). It had a winepress and an olive press adjacent one another (Ibid., 117–119). Corbo thinks that these monasteries are reminiscent of late Roman *villa rustica* establishments (Ibid., 2), which usually were large-scale agricultural production centres. More presses were found in nearby monasteries of Khirbet Biyar Luqa, Khirbet Giohdom (Ibid., 5) and in Keniset er-Ra'awat (Tsiferis 1975: 15–17).

Even though the monasteries in the region of Bethlehem may have been specialised in olive oil and wine production, both were produced in other locations as well. The remains of winepresses were discovered in the monasteries at Khirbet Umm Rukba (Hirschfeld 1990b: 15) and Khirbet Bureikût (Hirschfeld 1990b: 47) in the Judaeen desert and in the nearby Khirbet Abu Rish (Magen and Baruch 1997: 347–349). Olives and/or grapes were also pressed in a village monastery at Horvath Beit Loya ca. 35 km south-west of Jerusalem (Frankel *et al.* 1990: 287–300), at Khirbet ed-Deir (Hirschfeld 1999: 171–172), in the seventh-century Kursi-Gergesa, in Mount Nebo (Saller 1941: 193–195), at Ramat Rahel (Testini 1962: 86), in Ma'ale Adummin (Magen 1993: 185), and in St. Catherine's monastery in Sinai (Dahari 2000: 161).

Pulses and vegetables were an important part of the daily diet as well. Characteristic pulses to the region – peas, broad beans, lentils, chickpeas, and lupins (Zohary 1973: 626) – were grown in the fields or in gardens, whereas vegetables were usually garden plants. In favourable conditions the fields were dry-farmed, but garden plants were often irrigated. (Zohary 1982: 41.) The remains of edible plants have also been found at the sites in Byzantine contexts. The macrofossil finds

represent the consumption of the foodstuffs, but the monks may have grown these plants in their gardens and fields as well. At Shelomi in the Western Galilee, the finds included olive kernels, grape pips, as well as remains of fodder for cattle, all of which according to Dauphin were cultivated at the site¹ (1993: 43–48). At Tell Masos in the Negev, only traces of lentil were uncovered as indicators of the Byzantine period diet (Fritz and Kempinski 1983: 213). However, approx. 60 km to the south-east of Tell Masos at Deir 'Ain 'Abata, the occupants of the site used olives, dates, bitter vetch, grapes, apricot, cucumber and/or melon, lentils, barley and bread wheat (Politis 1989: 230–231). Furthermore, approx. 110 km south-east to of Tell Masos, the Byzantine inhabitants of Jabal Harûn consumed barley, lentils, olives, dates, and grapes (Tenhunen 2001: 386 – 387). In all of these three places the origin of the foodstuffs is yet unknown, but the monasteries had fields nearby (Fritz and Kempinski 1983: 148; Politis 1989; Lavento and Huotari 2002: 105) and the cultivation of the found plants is also environmentally conceivable.

Further south in monasteries of southern Sinai, the diet included a lot of fruit. Peaches, apricots, grapes, almonds, prunes, plums, pomegranates, pears, dates and olives were consumed in the hermit communities near St. Catherine's monastery. Dahari argues that the fruit was produced in the orchards and wine was grown in the slopes of the mountains. (2000: 161–162.) It is reasonable to believe that the diet at St. Catharine itself was mainly composed of the same ingredients. However, a sixth century bread-oven has also been found in the coenobium (Forsyth and Weitzmann 1970; Pl. 22A), which indicates that bread was baked either from home grown or imported grain.

Cyril of Scythopolis recounts how in the sixth century figs were grown in the coenobium adjacent to the Great Laura. In the Judaeen Desert, the water conditions

¹ Dauphin calls Shelomi a monastic farm in lack of a church or a chapel. Hirschfeld, however, interprets the site as a monastery, where the church was located on the second floor (Hirschfeld 1999: 68, footnote 143).

seem to have been marginal for figs, because the monks had to water the plants throughout the winter. (*V. John Hes.* 26.) Elsewhere in Palestine the fig species can be found near the streams and in wadis and they have been planted in the region at least for 5000 years (Zohary 1973: 630–631). In addition, the date palm may have been particularly significant in the southern Palestine, because its wild forms have a natural habitat ranging from dry cliffs to salines and it grows in the Sudanian hot deserts as well (*Ibid.*, 632). Besides producing fruit, the trees offer also material for handicrafts. The basket-weaving monks are mentioned in several anecdotes, but we only know that the monks at Choziba had four date palms, which gave them fruit and reeds and in the end could be cut down for timber (*V. Geor.* 7). In general, the fruits are easy to conserve by drying them, and dried fruit have much nutritional value.

6.3 ANIMAL HUSBANDRY AND FISHING

The historical sources are not abundant about the presence of animals in the monasteries. Asses (*Pratum spirituale*, 107) and mules (*V. Sab.* 44) seem to be the most common animals and they have been used for transportation and as beasts of burden. Monks were also assigned to work as muleteers (*V. Sab.* 8.) Remains of stables have been found in the monasteries at Ma'ale Adummin (Magen 1993: 175–177), Khirbet ed-Deir (Hirschfeld 1999: 13–16), Bir el-Qutt (Corbo 1955: 119–120), and Khirbet Siyar el-Ghanam (Corbo 1955: 28). The stables seem to have mainly served for the monks' pack animals, but they have housed the animals of the visitors as well. According to Magen, there was even a separate stable in the hospice of Ma'ale Adummin (1993: 189).

Animals may have been kept for human consumption as well. In the monasteries of Deir ash-Sha'ir and Umm 'Uweini in the Hauran, the remains of potential animal pens are visible outside the monasteries, which makes Villeneuve suggest that the monks were breeding domesticated animals (1985:120–121). Magen

has identified service rooms for the cattle and their keepers inside the monastery at Ma'ale Adummin (1993: 176). In the sixth century, the monks of the monastery of Theodosius pastured swine in their fields (*Pratum spirituale*, 92.). However, in all three cases it remains unclear, whether the animals were bread for the consumption of the monks or outsiders.

Literary sources further reveal that the leftovers in Choziba included bones (V. *Geor.* 3.12). According to Di Segni's interpretation, the author refers to carrob, date, olive and other fruit stones (1991: 138 endnote 25), because the monks of Choziba could not have eaten meat. Animal bones, however, have been found in excavations as well. Over 40 000 thousand animal bones have been recovered at Deir 'Ain 'Abata. The excavators have identified the presence of horse, cattle, pig, sheep/goat, fallow deer, roe deer, domestic fowl, partridge, quail, and various fish species (Politis 1992: 284), which points to a versatile exploitation of local and imported animals. Bone finds were also abundant in the nearby laura of Dayr al-Qattar al-Byzanti. Though the finds have not been analysed yet, Holmgren and Kaliff report the presence of cattle, pig, sheep, goat, domestic fowl, and fish. (1997: 324.) Moreover, at Mount Nebo, Saller reports finding bones from a sixth to eighth century in the refuse heap of the monastery. He suggests that the bones originate from the kitchen. (Saller 1941: 147.)

In Jabal Harûn, the finds of one room of the complex comprise 4682 bones of which 51% are fish bones, 43% are mammal bones and the remaining 6% are bird bones. Judging from the associated pottery, the finds originate from the late fifth century and the sixth century. (Studer 2001: 384–385.) However, the bones were found in a part of the monastery that may have served as a pilgrims' hostel (Frösén *et al.* 1999: 403). Therefore, these remains may not represent the monks' diet. Nonetheless, fish bones in particular have been found in the other parts of the monastery as well (Frösén *et al.* 2001: 375).

The fish bone finds suggest that fish may have had a wider importance in the diet of the monks than previously thought. In the desert town of Nessana, the abbot of a monastery conducted business affairs, which also included the transportation of fish. A preserved seventh century letter recounts the story of a pickled fish shipment, which the abbot sent to a deacon of the Church. (P. Ness., 47.)

On the coastal regions the sea may have provided living for the monks. The Monastery of Kursi-Gergesa was located by the Sea of Galilee, which was known for its fishing industry in the Roman period (Safrai 1994: 163–164). Therefore, Tsferis proposes that fishing in addition to oil production provided some income to the monks after the AD 614 Persian invasion, which reduced the number of pilgrims to the site. (1983: 36.) Due to its favourable location by good fishing waters, the monks of Kursi could have taken advantage of the sea previously as well. In the twelfth century *typicon* by Nikephoros the *mystikos*, fishing was one of the occupations in a Bithynian monastery, which was located by the Sea of Marmara (modern Turkey) (*Heliou Bomon*, 19). Hence, in Palestine fishing may have been a source of income for monasteries located by the Mediterranean, the Red Sea and the Sea of Galilee.

6.4 GATHERING OF WILD PLANTS

In addition to cultivated plants, the monks collected edible wild plants to supplement their diet and to acquire raw materials. In the fifth century Judaeian Desert, the monks of the monastery of Theoctistus gathered *manouthion* (*V. Sab.* 8.) and in the sixth century the monks of the monasteries of Choziba and Euthymios were recorded in the same task (*V. Euth.* 50; *V. Geor.* 14). Anthony of Choziba further reveals that *manouthion* was collected once a year for the need of the whole year and all the available monks took part in the work (*V. Geor.* 14). The bushes were then stored in a warm and dry place near the oven (*V. Geor.* 24).

Hirschfeld suggests that the *manouthion* may have been the tumble thistle (*Gundelia tournefortii*) (1992: 89), also known as the tumbleweed and *a'kub* or *ka'ub* in Arabic. It is native to the Irano-Turanian region, but can be found in the Mediterranean parts of the Levant as well. The tumble thistle develops flower buds from February to April and the young shoots, which resemble artichokes, can be eaten fresh or cooked. However, they wither quickly and today they are sold in the same day unless there is a cool storage available. Lev and Abbo do not mention whether the shoots have traditionally been preserved for later use. Thus without a refrigerator, the tumble thistle is a seasonal delicacy. These days during the short harvest time, it can bring a good income to the collectors. Moreover, the entire plant may be used as fresh animal fodder, or dried for later use. (Lev and Abbo 1999: 217.) Hirschfeld also claims that the tumble thistle was used as fuel (1992: 89), which may have been the reason to store it near the oven at Choziba. Hence, the monks could have used the tumble thistle in diverse ways, not just to supplement their diet. Even though the ancient sources do not mention its sale in the local markets, it was a potential seasonal cash source for the monasteries.

The monks in the monastery of Euthymius also gathered *malwa* (V. Euth. 56), which according to Hirschfeld may have been the saltbush (*Atriplex halimus*) (Hirschfeld 1992: 89–90) also known as sea orache. This hardy perennial grows throughout the Mediterranean region, in the Middle East, northern Africa, and southern Europe. It can reach the height of 1–2 m and tolerates a wide variety of soils and even thrives in salines and desert shrublands. The leaves of the plant are edible raw and cooked and they can be used as fodder for cattle as well. As saltbush is resistant to drought, it secures fodder for animals even during the long dry periods. Like tumble thistle, saltbush has also been used as fuel. (HDRA 2000.)

The third plant collected by the monks was the caper (V. Geor. 42). The caper (*Capparis spinosa*) grows in a wide area stretching from the western Mediterranean into Iran. It is rather sensitive to cold and thrives in intense sunlight. It prefers well-

drained poor soils, where it grows up to height of 1 m, but wild capers rather sprawl on the ground instead of growing upward. The caper is also known for its tolerance of salty soils. The cultivated capers require 350 mm of annual precipitation to produce fruit, but the wild species probably need less. Today, the capers are the flower buds of the plant, which are pickled in vinegar or preserved salt. The tender young shoots including the immature small leaves may also be pickled or cooked as a vegetable. In the past, caper roots have been burned to obtain salt from the ash. (D'Urzo and Alkire 2000.) Like the other desert shrubs, the plant may have been used as fuel as well.

In the sixth century, the Sinai monks also collected a substance called *manna*. The Piacenza Pilgrim and his companions received it as *eulogiai* in flasks and the monks themselves drank the liqueur they had made of manna. (Anton. Placent. *Itin.* 39.) In addition to this brief reference, nothing else is known of manna: it has not been identified nor is its economic significance understood (Dahari 2000: 162).

In addition to the plants mentioned in the ancient sources, the monks could have used other natural plants as well. Bailey and Danin have studied the Bedouin utilisation of the wild plants in Sinai and in the Negev. They found that 70 species were used as food and fodder and 50 plants were used for medicinal purposes. Plants could also be used for making domestic utensils such as bowls, mats and baskets. Other products included tinder, charcoal, laundry soap, animal traps, perfumes, and glue. They also noticed that the use of plants has a very seasonal nature, in particular in the case of animal fodder. The feeding of the animals was most difficult from August to November, when the plants are dying or drying up before the next winter rains. (Bailey and Danin 1981: 145–149.) This study shows the versatile use of local plants among the present Bedouin population. The monks may have known the use of the plants as well, as these were available in the Byzantine period.

7 MONASTIC WEALTH SOURCES

To secure the daily bread, monks had to produce their own food or produce goods that they could sell or exchange for food and clothes. To have water they needed to collect rainwater, because of the scarce amount of surface and groundwater. They could have used natural caves as dwelling. However, for their religious needs, the monks required religious texts and places of worship, the latter including chapels and churches. In addition, more complex forms of livelihood, such as agriculture, added to the need of having a more permanent infrastructure. The monks also relied on the support of visitors and inhabitants of the region. The relevant question here is whether such group of ascetics relied on charity to survive or it ensured its needs in other ways as well. Apparently, Sabas, who founded the coenobia of Kastellion, of the Cave, Scholarius, and Zannus, refused to secure a regular income for the monks wanting them to rely totally on charity (*V. Sab.* 58).

In addition to the wealth sources discussed in this chapter, the agricultural activities, the cultivation of grain, wine and olives in particular, may have been a significant source of wealth to some monasteries. Evidence of monastic food production was presented in chapter 6.

7.1 PILGRIMAGE

The first historically recorded Christian pilgrim in Palestine was Melito of Sardis in the second century. However, the real boom started in the early fourth century after the pilgrimage of Helena, mother of the Emperor Constantine I (AD 324–337). The pilgrims donated money to the holy sites and people, but also paid with money and gifts in return for feeding, guiding and accommodation in or near the monasteries. Pilgrims came to see the holy sites, where they could among other things relive biblical events and strengthen their faith. In addition, one of the reasons for

pilgrimage was to seek cure for illness (Kötting 1980: 312–322), and the monasteries and their holy men seem to have attracted the sick. In the fifth century, a famous monk Euthymius miraculously cured the son of a wealthy Saracen chief, while he stayed at the monastery at Theoctistus. As a result, the fame of Euthymius spread to all Palestine and surrounding regions and he healed all the people that came to him. (*V. Euth.* 10.)

Furthermore, the pious travellers also tried to acquire relics associated with saints or earth collected from a holy place. Many Christians regarded these relics as visible testimony of sanctity. Back home the saint could be thus present among the local congregation through the relics and other small mementos, *eulogiai*¹. Relics also increased the status of the pilgrims who had acquired them and the status of the places where they were kept (Kötting 1980: 332). Consequently, the commercial market for relics and mementoes was considerable, which started the production of souvenirs for pilgrims (Hunt 1982: 135–136). Already in AD 386, the relic hunt appears to have reached an intolerable level, as it was prohibited by law (*CT* 9. 17. 7). Apparently the injunction was disobeyed, because still in AD 473, the grave of Euthymios was sealed off firmly with a tombstone to prevent the removal of his remains (*V. Euth.* 42).

No law, however, prevented the production or distribution of *eulogiai*. In the fourth century the monks at Mount Sinai and at Mount Nebo gave fruits, which they cultivated in the vicinity (*It. Eg.* 3.6), to a pilgrim called Egeria and also guided the pilgrims in the holy sites. (*Ibid.*, 3.1; 11.1–3). Egeria continues her description mentioning the Baptismal place, where the monks gave pilgrims fruits as well. These monks had their dwellings in the fruit gardens of Saint John the Baptist. (*Ibid.*, 15.6.) Religious mementoes were not limited to fruits, because later pilgrims were given vessels containing, for instance, olive oil. Holy oil was sought after, because it had

¹ *Eulogiai* = 'souvenirs' from the visits to holy places or to holy men such as pilgrim's flasks, fruit from the monks' garden etc. See further Kötting 1950: 403–413.

miraculous properties. In return for the oil, the grateful admirers donated money and goods for the monasteries. For instance, the oil from the tomb of Euthymius cured people, such as Caesarius, who then gave substantial alms to the monastery, and promised to contribute more every year. A monk was sent to Antioch in Syria to fetch the yearly alms. (*V. Euth* 47). The oil also cured a young girl and a boy (*V. Euth* 52–53), and a woman, who afterwards returned to the monastery every year and provided meals for the monks (*V. Euth* 54). In Choziba, the saintly fathers were buried together and the curative oil started incessantly flowing from the tomb (*Miracula* 6), thus providing the monks with an endless source of oil to bestow on visitors. The pilgrims carried the oil in special containers such as the pilgrim flasks, which have also been found at monasteries. For instance, two pilgrim flasks were unearthed at the monastery at Tell Masos (Fritz and Kempinski 1983:141). Thus the monks may have been able to benefit from souvenir manufacture. It is also possible that the local people may actually have produced these objects. Pottery kilns or glass furnaces have not so far been found in any Palestinian monastery, which seems to indicate that the flasks and other containers needed for souvenirs were made elsewhere.

Signs of pilgrimage may be detected in architectural details as well. Venerated shrines could have been decorated with expensive materials and the size of the church exceeded the needs of the monastic community. Furthermore, it seems that the visitors were not allowed to enter all the parts of the monastery. There are still traces of gates inside the monasteries, which blocked or controlled the movement of the monks and the pilgrims. In Mount Nebo, the progress of the pilgrims was restrained by a narrow passage between the atrium and the southern monastery (Saller 1941: 129–130). Similarly, in Khirbet ed-Deir there was an inner gate hindering the entrance of the visitors (Hirschfeld 1999: 29–35). In Ma'ale Adummin, the monastery and the main church were entered through a narrow corridor (Magen 1993: 177) and even the guesthouse was built outside the monastic enclosure in the

sixth century (Ibid., 188–189). In addition to corridors and gates, the passage of the pilgrims may have been channelled in other ways as well. According to G. Forsyth at St Catharine's monastery in Mount Sinai, the pilgrims were guided by the architecture as soon as they entered the main gate. Their route to venerate the Biblical Burning Bush passed the guesthouse and once inside the church they would walk one aisle to the chapel in the back of the apse and then return through the other aisle. (Forsyth 1968: 7–14.)

7.2 DONATIONS AND BEQUESTS

Generous contributions by the wealthy for the benefit of the community were characteristic to the Graeco-Roman world. For example, the benefactors might have constructed public buildings and distributed food for the poor. As Christianity grew, these donations were more often directed towards the Church and its philanthropic institutions. (Garnsey and Humfress 2001: 115–123.) Hence the monasteries began to obtain property at the very beginning of the movement. Prospective monks gave their possessions to the monastery they entered, and pious laymen and pilgrims donated cash and property to the monasteries as well. John of Ephesus mentioned two monasteries in Egypt, which were given a gold mine as an endowment (John of Eph., *Lives* 54). What the monastery gave in return was, chiefly, its spiritual assistance.

The Church obtained the right to inherit property and to receive it as a gift in AD 321, when Emperor Constantine granted it the status of a legal corporation (*CT* 16. 2. 4 and *CI* 1. 2. 1). Constantine himself and his mother donated generously to the Church, as they began to embellish holy sites in a grand scale (Hunt 1982: 6–49). Soon however, some among the clergy and the monks went too far in their quest for money, because already in AD 370 the clergy and monks were prohibited to solicit gifts for the church from widows and wards (*CT* 16. 2. 20). Yet the contributions to the Church and to the monasteries continued, and further legislation was needed to

keep the gifts in rein. Apparently, there were also problems with last wills, as the executors were reluctant to give the money and property to legal heirs. In a law issued ca. AD 474–477, it was ordered that the heirs were legally responsible to perform the promise, if the deceased had pledged to erect a charitable institution (*CI* 1.2.15). Emperor Leo I (457–474) ruled how a monastic founder's estate should be divided. The monastery was entitled to an equal portion allocated to a child, or even up to two thirds of the estate. (*NLeo* 14.)

In AD 546, Justinian I confirmed the Constantinian law regulating that the Church – monasteries included – was guaranteed its right to inherit and administrate properties. However, earlier during his reign he had already attempted to control the donations and bequests in more detail. In AD 528, he enacted that everyone might donate less than 50 solidi to the monasteries without a written contract. If the donation was larger, then a lawful written contract was needed, unless the emperor donated the money. (*CI* 1.2.16.) He also granted tax relief for monasteries and other ecclesiastical institutions, on gifts and legacies that they receive (*CI* 1.2.18). Furthermore, Justinian imposed punishment on people who declined to fulfil their promise for a pious donation (*CI* 8.53.35). In AD 529, he also enforced the execution of wills by decreeing that the property willed to the Church or its charitable foundations should be given to these institutions. Otherwise the heirs would be punished by ecclesiastical or by provincial authorities. (*CI* 1. 3. 45.)

Hence, by the mid-sixth century, there was already an abundant legislation to control religious donations and bequests. The same laws also reveal the main contributors, namely the Imperial family, other devout patrons, and the monks themselves.

7.2.1 Imperial Family

After Constantine and Helena, members of the imperial family seem to have continued their generous donations. In the fifth century Empress Eudocia, wife of

Valentinian III, founded a large number of monasteries, churches, poorhouses, and hospitals in Palestine (Evagr. *HE* 1.21–22; *V. Euth.* 35). One of the monasteries was founded on her estates in the village of Ganta c. 25 km from Jerusalem. The property was left to the church of Jerusalem in her will (John Rufus, *Plerophoria*, 20). Eudocia even financed a tower near the laura of Euthymius to enjoy his teaching. The laura became later part of the monastery of Scholarius at Khirbet el- Muntâr (*V. Euth.* 30.) She constructed a church and a large cistern for the use of the monks and pilgrims near the monastery of Euthymius (*V. Euth.* 35). The remains have been identified at modern Qasr ‘Ali 6 km east of Jerusalem, and adjacent to them were also the living quarters of the monks (Hirschfeld 1990a: 287–294). Eudocia also funded a church of Saint Stephen (*V. Euth.* 54. 3–6) and an adjoining monastery in Jerusalem, which became one of the leading pilgrim destinations. (Hunt 1982: 242.) Avi-Yonah has calculated that Eudocia spent altogether about 1 500 000 gold coins during her stay in Jerusalem (1958: 44).

In the sixth century Emperor Anastasius I (AD 491–518) founded a church and a monastery of Saint John the Baptist at the baptismal site of Jesus (Theod., *De situ*, 20). In AD 511, Sabas and some other monastic superiors visited the emperor in Constantinople, and one of the superiors asked for the lands surrounding his monastery from him (*V. Sab.* 51). During the same visit, the emperor donated 2000 solidi to Sabas (*V. Sab.* 51; 54), who in return gave the money to his monasteries (*V. Sab.* 55). On another occasion, Hypatius, the emperor’s nephew, gave Theodosius and Sabas 100 pounds of gold to distribute among the monks of Jerusalem (*V. Sab.* 56).

The monastic life experienced a particular *floruit* during the reign of Justinian I (AD 527–565), who took an active interest in the welfare of the monks by legislative and financial methods. He also invested imperial funds into the construction of churches and monasteries of Palestine, including the church and a fortified monastery of St. Catherine in Sinai. Because of the monumental architectural details,

Hirschfeld proposes that the monastery of Deir Qal'a in western Samaria was also built during Justinian's reign, and it may even have been funded by the Imperial treasury (Hirschfeld 2002: 183). Within 2–5 km of the monastery lie the remains of four other monasteries, which appear to have originated in the same time period (Hirschfeld 2002: 185–187). Hirschfeld connects the construction of these sites to the events of AD 530, when Sabas visited Constantinople and refused an income for his monasteries offered by emperor Justinian I. Instead, he asked money for rebuilding of Christian sites destroyed in the Samaritan revolt AD 529, which the emperor granted him. (*V. Sab.* 73.)

7.2.2 Private Donors

Wealthy women played an important part in the finances of the Church and the monasteries. Jerome wrote about Melania the Elder, a Roman noblewoman, who founded several monasteries and a hospice beside a road near Bethlehem at the end of the fourth century (*Jer. Epist.* 108, 14). In the early fifth century, her distant relative Melania the Younger, sold her estates in Spain and came to Palestine, where she funded a convent for women and two monasteries for men on the Mount of Olives in Jerusalem (*V. Mel.* 41–48, 49, 57). Palladius mentions that she gave 15 000 gold coins of her considerable funds to Palestine only (*Historia Lausica*, 61). Around AD 450 a woman called Icelia funded the construction of the Kathisma monastery near Bethlehem. After the identification of the site at Ramat Rahel, the excavations have revealed a fifth-century church and a monastery built on top of a previous settlement (Testini 1962: 77–90). In addition to the two Melanias and Icelia, there were many other women as well, who gave their entire property to the Church and its institutions and later became nuns in Palestine (Hunt 1982: 168–179, 241).

Beside women, also men contributed large sums to monasteries. A wealthy Constantinopolitan man gave Theodosius 100 solidi and then continued his donations yearly. (*V. Theod.* 3.) Peter the Iberian, a pilgrim and a monk, founded a

Georgian monastery in Jerusalem in the first half of the fifth century (Lang 1976: 66). Some people even donated money anonymously, such as the person who gave 170 gold coins to pay for a hospice for foreign monks in Jerusalem (*V. Sab.* 31). As such, money kept flowing into Palestine from the other Roman provinces, but the local inhabitants contributed their own share as well. Cyril of Scythopolis relates an interesting account how Maris, a Saracen and formerly a Persian subject, and his whole tribe converted to Christianity. He stayed in the monastery of Theoctistus near the road to Jericho and donated his property for the building and the extension of the monastery. (*V. Euth.* 10.) In AD 485, Terebon the Saracen left a considerable fortune to the monasteries of Euthymius (Khan el-Ahmar) and Theoctistus (*V. Cyr.* 6). Peter, another wealthy Saracen, contributed in kind, for he brought skilled workmen to build a great cistern, bakery, three cells, and a church for the new laura of Euthymius (*V. Euth.* 15).

Generous contributions to the monasteries continued in the sixth century. The Life of Sabas reveals how the eunuchs of Juliana, a Constantinopolitan noblewoman, came to Palestine after her death with a considerable amount of money and settled in their own monastery near Jericho (*V. Sab.* 69.) In the first half of the sixth century, Sophronius, the superior of the monastery of Theodosius, received money from his wealthy relative, Mamas, who was an imperial official in Constantinople. Mamas donated large sums to the monastery and Sophronius used them to expand the monastery fourfold. Sophronius was able to acquire property and annual revenues to the monastery and the number of monks tripled. (*V. Theod.* 5.) The Piacenza Pilgrim narrates how a young widower gave all her money to the poor and the monasteries in the city of Elusa in the Negev (Anton. Placent. *Itin.* 34.) In the provincial capital Scythopolis (modern Beit She'an), Lady Mary, a local benefactor, founded a monastery around AD 567. The remaining inscriptions testify to the donations given by her and by other members of the local nobility. (FitzGerald 1939: 13–15.)

Donations in kind seem to have been given as well. For instance, Cyril of Scythopolis recorded a story of a woman who hired two weavers to make two curtains for the monasteries of Kastellion and the Cave (*V. Sab.* 80). Similarly, he recounts how visitors from Jerusalem gave 30 animal loads of wine, bread, grain, oil, honey, and cheese offerings to the Great Laura during a famine (*V. Sab.* 58). Yet another group of visitors from Madaba in Transjordan visited Sabas and gave his laurae and coenobia offerings of grain and pulses (*V. Sab.* 45). An inscription in the chancel screen at the monastery of Martyrius at Ma'ale Adummin states that it was a gift from Antonina and Auxentius in the second half of the sixth century when the church was rebuilt (Di Segni 1990: 156–157, 161). In a will written in AD 573, Obodianos divided his property in half between the church or monastery of the Saint High Priest Aaron (probably the complex in Jabal Harûn) and the hospital of the Saint Martyr Cyricus in Petra (Frösén 2002: 22). However, the ascetics refused donations as well. In the Negev, a group of nuns refused money, clothes, vegetables, lamp oil, dates, chickpeas, and lupines, which Christian pilgrims wanted to give to them (Anton. Placent. *Itin.* 34).

7.2.3 Monks

The contribution of the ascetics to their monasteries does not seem to be insignificant either. New monks donated property to the monasteries upon entering, and they were also free to spend the property they had acquired after entering the monastery (*NLeo* 5). If we are to believe the message of Leo's edict, the monks could have had private possessions. The legislation of AD 434 further supports this supposition, because the possessions of a dead monk or nun belonged now to their monastery, if they did not have any blood relatives (*CT* 5.3.1). In AD 455, it was declared that nuns were permitted to bequeath all their property to the church (*LNMarc.* 5.2). The legislation also decreed that the monastery could keep the property of a monk who left it (*CI* 1.3.38). The intent of this law seems to have been to settle disputes between

monasteries, if the ascetic had changed his monastery. Secondly, this way monastic property could not be retaken into profane use.

Sabas, a famous Palestinian monastic leader, provides a good example of how donations and bequests were gained and used in the fifth century. He received three solidi from his parents, which he gave to the monastery of Theoctistus at Deir el-Mukallik (*V. Sab.* 9). At a later date, after the death of his parents, Sabas received a considerable sum of money as his inheritance. With the money he bought a guesthouse with a garden in Jericho and built a guesthouse in the laura (*V. Sab.* 25). Sabas and his monks were also donated food from another monastery near Bethlehem (*V. Sab.* 27).

The superior of the monastery of Euthymius at Khan el-Ahmar provides a good sixth-century example of the funds donated by the monks. He gave his family property to the monastery after the death of his brother, and later he left 600 solidi to the monastery (*V. Euth.* 47–48). In the sixth century, Justinian treated monks' properties in several laws in which the inheritance issue concerned both secular and religious realms. The state's eventual concern was its main source of income – the taxes – for which reason the fate of landed property in particular was very important. In his Edict 76, Justinian ordered that no one was compelled to dispose of his/hers property before entering a monastery. Therefore, the person could leave it partly or wholly to his children or dispose of it as he pleased. To secure the rights of the children, Justinian confirmed that the children of a person who entered a monastery were entitled to have their legal portion of the property (*Novella* 123. 38). On the other hand, he also ensured that parents were not permitted to disinherit their children when they entered a monastery (*Novella* 123. 41). Apparently, the disinheritance was not always a problem, as we have already seen in the case of Sabas in the fifth century. Furthermore, in Edict 123.37, Justinian ruled that the donations, bequests and the property given to monks belong to the monastery. He

also confirmed the fifth century law that the property of a monk who transfers to another monastery remained with the first monastery (*Novella* 123. 42).

Justinian also wanted to ensure that the monks' and nuns' obligations to their families did not end upon entry into a monastery. Widowers had to provide for their children even after entering a monastery. Similarly, married persons, who decided to enter a monastery, had to ensure that the husband/wife left behind received their legal part of the dowry and ante-nuptial donation. (*Novella* 40.) That monks could still own private property is further indicated by a sixth century inscription found at the monastery of Khirbet ed-Deir, according to which two monks donated funds for the altar table of the church (Di Segni 1999b: 99). Also the preserved papyri 44–47 and 53 in Nessana seem to deal with the private affairs of Patrick, abbot of St. Sergius (Kraemer 1958: 6), which indicates that monks did not necessarily donate all their property to their monastery, but continued conducting private business transactions.

7.3 IMMOVABLE PROPERTY

Though the possessions of the early Christian monasteries are largely unknown, the ecclesiastical and profane laws about the management of those properties are partially preserved. The existence of immovable property – mainly land – and the legislations concerning its use are presented below. Buildings, which could have provided income for the monasteries, are presented in subchapter 8.3 and chapter 9. Beside the monks' own direct utilisation of immovable property, the secondary uses – renting, leasing and sale – are also discussed below.

7.3.1 Monastic Lands

As we have seen in subchapter 7.2, immovable property, such as land, was donated and willed to the monasteries. In addition, the monks probably took the nearby marginal agricultural lands to their use. For instance, in the fifth and sixth centuries the new monastic foundations in the Judean desert and in the Negev were part of the

process of settlement and population of the marginal land (Bowersock, Brown & Grabar 1999: 584). However, the marginal lands had previous users as well and there is some evidence of land disputes between the monks and the local shepherds. Cyril of Scythopolis narrates how the monks at the Monastery of the Cave complained when the flocks of goat and sheep were pastured on the monastic estates (*V. Sab.* 59).

At the beginning of monasticism in the fourth century, the imperial patrimony was among the largest landowners in Palestine (Jones 1964: 415–416). The rest of the land was divided between private landowners and corporations such as the cities and the religious orders. The ratio between private, imperial and corporate owned land varied throughout the period as the ownership tended to accumulate in fewer and fewer hands. (Jones 1964: 773–781.)

In time, the Church became one of the greatest landowners. Vasilievsky has estimated that at the end of the seventh century the Church and other charitable institutions held approximately one third of the serviceable land of the East Roman empire (Vasilievsky as cited in Charanis 1948: 54). This is by no means an insignificant amount considering the deserts and desert salines, which cover large tracts of Palestine (Appendix 3). On the other hand, Kazhdan and Constable, and other researchers argue that the Eastern monasteries were only minor landowners before the end of the ninth century after which they started receiving generous imperial donations (1982:131; Talbot 1991: 1392). In reality, without written sources, there is no way to determine how much land the early church owned even proportionally.

The historical sources do not mention the amount of land owned by any Palestinian monastery, but the minimum amount must be the size of the enclosed area discovered in archaeological investigations. In rare cases the area of the adjacent fields, which seems to have been owned by the monks, has been tentatively

identified as well. The size of the enclosed areas and the area of cultivated fields is presented in the following table.

Table 6. The enclosed areas of the coenobia and the related fields and gardens.

Coenobium	Enclosed monastic area in m ²	Fields and gardens in m ²	Source
Bir el-Qutt	1400	Area unknown	Corbo 1955: 112. I estimated the area from the plan in fig. 30.
Bir el-Qattar (Spelaion)	3200	Area unknown	Hirschfeld 1999: 161
Deir ash-Sha'ir	1170	Area unknown	Villeneuve 1985: 119. The size of the enclosed area is 36,5 by 32 m
Deir Dosi (Theodosius)	9000	Area unknown	Hirschfeld 1992: 49, table 3
Deir Mar Jiryis (Choziba)	1800	Area unknown	Hirschfeld 1992: 49, table 3
Deir Muqallik (Theoctistus)	2200	Area unknown	Hirschfeld 1992: 49, table 3
Deir Qal'a	2500	Area unknown	Hirschfeld 2002: 183
El-Qasr	225	Area unknown	Hirschfeld 1992: 49, table 3
El-Qasrein (Severianus)	600	Area unknown	Hirschfeld 1992: 49, table 3
Jabal Harûn	3000	Area unknown	Fiema and Holmgren 2002: 101
Keniset er-Ra'awat	1300	Area unknown	Corbo 1955: 90. I estimated the area from the plan in fig. 28a.
Khan el-Ahmar (Euthymius)	3500	2 500	Hirschfeld 1993: 339–371
Khirbet ed-Deir	4000	33 000 (2750 certain)	Hirschfeld 1999: 155
Khirbet el-Mird (Castellion)	1200	Area unknown	Hirschfeld 1992: 49, table 3
Khirbet el-Quneitira	1500	Area unknown	Hirschfeld 1992: 49, table 3
Khirbet et-Tina	560	Area unknown	Hirschfeld 1992: 49, table 3
Khirbet Siyar el-Ghanam	2400–3000	Area unknown	Corbo 1955, tav. 62. I estimated the area from the plan.
Kursi-Gergesa	18000	Area unknown	Tsaferis 1983: 2
Ma'ale Adummin	6400	Large	Hirschfeld 1992: 49, table 3
Mount Nebo	6000–8000	Area unknown	Saller 1941: 207
Mount Sinai (St. Catherine)	5200	Area unknown	Forsyth 1968. I estimated the area from the plan in fig. 1.
Qasr er-Rawabi	286	Area unknown	Hirschfeld 1992: 49, table 3
Tel Masos	600	Area unknown	Fritz and Kempinski 1983: 138.
'Umm 'Uweini	4200	Area unknown	Villeneuve 1985: 119

7.3.2 Rents, Leases and Sales

It is plausible to believe that during the period of this study the monasteries rented, leased, and sold their immovable property. The sale of such property, however, became increasingly difficult according to the contemporary laws. The Council of Chalcedon (AD 451), stipulated that monasteries consecrated by the local bishops were to remain monasteries forever (Council of Chalcedon, canon 24). Thus, the monks were not allowed to dispose of their property and they could not convert it to

profane use either. The secular laws followed soon after: a law forbade the sale of the land to heretics, if a church or an oratory was erected there (*CI* 1.5.10). Then Leo I banned the alienation of the property of the church of Constantinople in AD 470 (*CI* 1.2.14). In AD 529, Justinian strictly forbade the alienation of all Church and monastic properties declaring the sale and exchange illegal and the transactions invalid (*CI* 1.3.55). He confirmed this law in Edict 7.1, where he also defined the immovable church property as buildings, fields, gardens, or anything of this kind, rustic slaves, and grain provided by the state.

Justinian was also concerned with the profitability of monastic fields, so he forbade acquisitions of infertile land. The contract was to be void and the official in charge, abbot or steward, was personally liable for the loss. (*Novella* 7.12.) However, it seems that partly because of their impotence in handling their own affairs, monasteries contracted debts. Finally, Justinian agreed to the alienation of immovable property if the religious houses had no other way of paying taxes or debts to private creditors. (*Novellae* 46 and 120. 7. 1.)

Because of the difficulties in selling the property, the monasteries could still have leased out their lands, if the monks would not cultivate them. The law of AD 530 established rules for leasing of ecclesiastical realty: the Church was not allowed to let its property for more than twenty years at a time (*CI* 1.2.24). In a later edict, Justinian confirmed the right to transfer property by temporary or perpetual leases (*Novella* 120.6.1). The length of the perpetual or *emphyteutical*¹ leases of the Church was limited to three generations of lessees. The property should be appraised at the beginning, and the rent was based on this appraisal, not on the income, for the next twenty years. (*Novella* 7.3.) Furthermore, if the lessee or *emphyteuta* did not pay the rent for two years, the religious house could collect the rent and eject the lessee

¹ *Emphyteusis* is a perpetual right in a piece of land that is the property of another: the right consists in the legal power to cultivate it, and treat it as our own, on condition of cultivating it properly, and paying a fixed sum to the owner at fixed times. See further Jones 1964: 417-420.

(*Novella* 120. 8). The monks could act as lessees as well. If the monastery wanted to lease the adjacent lands from their owner, all the monks had to give their consent and the contract had to be publicly recorded. Similarly, the monasteries could lease land from one another. (*Novella* 123.6.)

Despite the abundance of laws, the scale of monastic involvement in real property sales and rentals is not known. Evidence of the monastic land sale is preserved in a Petra papyrus, a land sale registration, according to which Filoumenos, hegumen of a church/monastery in Ammatha, bought a plot of land for his institution. One of the witnesses of this document was a monk from the same institution, which may indicate that the place was a monastery. (Lehtinen 2000: 95.) Cyril of Scythopolis recounts another sale of land in Jericho, where Sabas bought gardens for his monasteries (*V. Sab.* 31).

7.4 HANDICRAFTS

Basketry and rope twining were considered appropriate occupations for monks already during the early monasticism in Egypt, because these activities allowed the monks to pray while they worked. The raw materials, palm leaves and reeds, were also widely available in Palestine, especially in the oases and near the sea. The ready products were sold to visitors in hospices or at the local markets. (Hirschfeld 1992: 104–105.) Nevertheless, the stories of basket making monks mainly refer to hermits (*V. Sab.* 10, *V. Eyth.* 6, *V. Geor.* 3). For instance, Sabas had just began a life as a solitary around AD 469, when he went to the monastery of Theoctistus every week to get palm leaves. He weaved 50 baskets in five days. (*V. Sab.* 10.) This story further reveals that the raw material was available for the monks of the coenobium, whose inhabitants redistributed the work of Sabas as well. Hence, it seems that the coenobite monks of Theoctistus weaved baskets and twined ropes as one of their occupations. Another reference to a coenobium has been preserved in an undated *Life*, in which Saint Mary of Egypt meets a Palestinian monk Zosimas, who with

other monks read the Holy Scriptures and made handiwork in a monastery near the river Jordan. (*V. Mar. Aeg.* 4–5)

Even though the reeds and palm leaves are rather perishable materials, remains of ropes and plaited work have been found in the hermitage at Dayr al-Qattar al-Byzanti by the Dead Sea (Holmgren and Kaliff 1997: 324). In the coenobia such finds have not been reported. In laurae, the hermits could have worked in their own cells. The coenobite monks, who lived in common dormitories probably worked elsewhere, for example in the open porticoes, courtyards and workshops.

7.5 FINES

As a punishment for some crimes, a payment of a fine to a monastery was required. The beginning of this practice is unknown, but in the sixth century Justinian I sent people to exile in monasteries. Part of their property belonged thereafter to these monasteries. (*Novella* 134. 10–12). For instance, if a deaconess was deprived of her ecclesiastical functions and sent to a monastery as a punishment, her property was to be divided between her children and the monastery (*Novella* 123. 30).

Monasteries received fines from other types of crimes as well. In AD 529, it was enacted in a law that an assault to a nun was punished by death. The perpetrator's property was used to pay compensation to the nun, and her monastery/hermitage would receive the rest. (*CI* 1.3.41; *Novella* 123.43). Justinian also legislated that in case of a fraud, if someone has accepted as a donation something belonging to a religious house, as a punishment he must give the donation and an equal portion of his own property to that religious house (*Novella* 7. 5). Furthermore, if a person presumed a perpetual emphyteutical contract, he was liable to lose the land in question, what he paid for it, and the rent he agreed to pay for it (*Novella* 7. 7).

The legislation seems to be the only surviving source of fines paid to monasteries in Palestine. Fines do not show directly in material remains, as there is

no evidence of the previous ownership of a piece of land or an object attached to them. The historical records of transactions, such as registering the forfeited land for taxes, have not survived in Palestine. As for cash fines, the origin of money cannot be discerned from the coin finds. However, it seems that some fines provided monasteries with a form of an income. It may have been sporadic, and not all monasteries may have benefited from it.

7.6 WAGES

The monks earned their upkeep in the monastery by performing various tasks, which were assigned to them. Apparently they received no financial compensation for their work. In some cases, however, the imperial fiscus paid the upkeep of the monks. For example, when emperor Anastasius founded a church and a monastery of Saint John the Baptist at the baptismal site of Jesus, he gave the monks an annual income of six solidi each (Theod., *De situ*, 20). Since the baptismal site was a major pilgrimage site, the purpose of the monastery was not just to commemorate a holy site, but also to provide services for the pilgrims. As the monks probably had little time for farming or handicrafts, they had a real need for a regular income.

Occasionally, however, there are references to monks who temporarily left their monasteries and worked for secular employers. A monk of the monastery of Abba Severian was sent to work in a farm in the district of Eleutheropolis/Beth Govrin (*Pratum spirituale*, 39). No wages are mentioned in this anecdote, but there could have been any reason to work outside the monastery other than for money or for charity. In wider context of the society, a large number of casual labour was needed to harvest the crops. Though the information on Palestine is scant, Jones emphasises that in Egypt many desert monks sought employment at harvesting times, and they possibly earned a whole year's income this way. (1964: 792.) John Moschos recounts how anchorites of Scete in Egypt had a habit to seek employment in the estates during harvest time (*Pratum spirituale*, 183). Similarly, the construction

of public and private monuments required transient work force. Not only skilled builders came to monasteries to work, but monks evidently went to construction yards to earn money. Such an occasion is recorded in a story of a monk, who worked on the construction of a reservoir to earn money to pay for the Bible (*Pratum spirituale*, 134).

In light of the meagre evidence, the financial demand to earn money outside the monasteries is impossible to estimate. It may have depended on the location and the properties of the monastery, and may have as well varied considerably in time. In a similar fashion, there is no way to assess how much money or goods the working monks brought to their communities. Ideologically, although ascetic habits can be maintained while working for others, clearly the principle of secluding oneself from the surrounding secular society is broken. The movement of coenobite monks was usually regulated by the rules and they were not allowed to leave their communities without a permit. Thus, they were not free to wander around to look for employment in the way the hermits could do.

8 MONASTIC WEALTH DISPOSITION

Within a monastery, the control of all the affairs was in the hands of the superior, whom the monks elected. Justinian confirmed the position of the superior in his Edicts 123.34 and 133.4. The practical management of the household and finances was delegated to a steward and his assistants. (Meimaris 1986: 239–263.) However, it was not until AD 451 that the Church decreed that all the ecclesiastical property should be managed by stewards (Council of Chalcedon, canon 26). In the sixth century, Justinian regulated that the monasteries were to appoint administrators to handle their business affairs (*Novella* 133. 5). The Church law required monasteries to have stewards only after the seventh ecumenical council AD 787 (Council of Nicaea, canon 11).

The Council of Chalcedon also decreed that no one was allowed to establish a monastery without the permission of the local bishop (Canon 4), which Justinian confirmed in the secular law in the following century (*Novella* 5.1). The reason for this legislation was to bring all the monasteries to the control of the Church, for apparently all the privately founded monasteries controlled their own affairs independently and even rejected the attempts of Church interventions. The privately founded monasteries could have been under the control of secular founding families, or be totally independent. Furthermore, to make the monasteries economically viable Justinian decreed that anyone who aspired to built a church must also provide the means for its upkeep – lighting, holy service, maintenance of the building and the personnel (*Novella* 67.2).

The ecclesiastic and secular laws gradually developed to regulate the birth of the monasteries and their financial administration. In this chapter, I proceed to discuss the possible uses of the monastic wealth. On one hand, part of the expenses was internal, when the money was spent for the good of the community. On the

other hand, as part of the society, monasteries had external expenditures as well. In their role as charitable institutions, they voluntarily distributed part of their surplus outside the monastery. Secondly, as landowners, the monasteries were also part of the fiscal system and had to pay taxes to the state.

8.1 FOOD SUPPLIES

If the monastery did not produce enough food or for its own needs, the deficit needed to be filled by other means such as purchase. The origin of the grain remains usually untold. Once we are even told how the granary was empty until it miraculously filled in one night (*Pratum spirituale*, 28). Less miraculously at the turn of the seventh century, the monastery in Choziba bought its grain from the province of Arabia. They had an agent, but it is not known if he was a monk or a layperson. (V. *Geor.* 6.25.) Di Segni suggests that the agent was not a monk, but a dealer/merchant who lived in Arabia and came to Jericho to get the money for the purchase (Di Segni 1991: 142, endnote 45). Interestingly enough, also the monks of the Great Laura near Jerusalem purchased grain at Machaerous in Arabia. In this case, hired Saracens transported the grain by camels. (V. *Sab.* 81.)

In addition to buying food, the food production required considerable financial investments as well as labor. The need for cisterns and agricultural terraces was already discussed in subchapter 6.2.2. These constructions were often needed in the dry farming areas such as Palestine and Arabia. Beside structures, wine and olive production requires considerable investment. Vine starts producing considerable crops only at the age of three to six years and the size of the crops begins to diminish after 25–20 years (Johnson and Robinson 2002: 18–19). The olive starts producing good crops after 5–20 years of its planting (Mattingly 1996: 219). The actual harvesting of both olives and grapes is very labour intensive as well (Mattingly 1996: 221 for olive). Furthermore, treading and crushing installations, presses, vats, storage spaces and vessels are needed for processing and storage of wine and olive oil. In

view of the need for substantial initial capital, Banaji sees the monasteries together with wealthy aristocrats as major investors in late antique wine industry (2001: 61) and I presume that the same conditions applied to the oil industry.

Whatever the sum invested in food supplies or gained by selling these, the coenobitic monks evidently received enough food. The physical remains of the monks at the Monastery at Khan el-Ahmar indicate the good nourishment level of the monks (HersHKovitz *et al.* 1993: 383). The result of the bone analysis in the urban monastery of St. Stephen in Jerusalem are very similar to those at Khan el-Ahmar revealing robust monks who enjoyed adequate to rich nourishment. (Sheridan 1999: 574 – 611). Thus, the testimonial accounts about monks who ate a loaf of bread every four days (*Pratum spirituale* 42) are probably related to only extreme cases of mortification. It is feasible to assume that the majority of the monks ate healthy food that provided energy for their physical tasks.

8.2 LITURGICAL FITMENTS, VESSELS, TOOLS AND BOOKS

Liturgical ceremonies, such as the Eucharist, were a very important part of monastic life. The ritual clothes and vessels – jugs and chalices for the wine and patens for the wafer – formed part of the church treasure. If possible, these were made of or decorated with valuable materials such as silver and gold. Members of the congregations and pilgrims often donated these precious objects to the churches and monasteries. The rest of the church treasure may have included donated and bequeathed jewellery, valuable objects and money. (Israel and Mevorah 2000: 85.)

The liturgical fitments were often kept in the rooms adjoining the church building (Israel and Mevorah 2000: 85). No valuable items have been reported found in the excavated monasteries of Palestine, yet historical accounts reveal acquisitions. For instance, in the fifth century a monk of the monastery of Euthymius was sent to Alexandria to buy altar-clothes from the archbishop. (*V. Cyr.* 6.)

Many liturgical artefacts such as reliquaries and altar furnishings were made of marble as well. Apparently, liturgical furniture was imported from marble production centres such as Constantinople (Fischer 1998: 268; Israel and Mevorah 2000: 75–77). In fact, marble furniture seems to have been common decorative element in monastic churches. At Mount Nebo, over 160 fragments of liturgical marble furniture have been dated between the years 500–650 (Acconci 1998: 469). Similar finds have been recorded in other monasteries as well (Magen and Talgam 1990: 108 for Ma’ale Adummin; Corbo 1955: 23–24, 87 for Khirbet Siyar el-Ghanam; Meimaris 1989: 102–105 for Khan el-Ahmar; Habas 1999: 119–132 for Khirbet ed-Deir).

Even in dire need, the monasteries were not supposed alienate any part of the church treasure. The sale of the valuable objects, however, may have taken place during the fourth and the fifth centuries, and only in the sixth century Justinian enacted laws and edicts to ban the practice. First, he prohibited the sale of liturgical vessels and robes for any other reason than for raising money to ransom captives (*Novella* 7.8). In a later edict, he moderated the law allowing the sale or exchange of unused religious objects to other religious houses. Unused metal objects could also be melted and the metal sold. The sale or exchange of objects was allowed to prevent the alienation of immovable property. (*Novella* 120. 10.)

Apart from church treasures, the ascetics needed vessels and tools in their daily life. Ceramic vessels were needed for the storage, cooking and consumption of food, but in general, they were not expensive during the time period (Gerber 2002: 202). However, there is a large variety in the quality of the pottery sherds. Their amount differs among monasteries as well. For example, both at Ma’ale Adummin and at Khirbet ed-Deir the majority of the pottery finds represent the last occupational period in the early seventh century. In the former, hundreds of good-quality vessels – jars, jugs, juglets, cooking pots, lamps, bowls and cups – were found mainly in the kitchen area (Magen 1993: 194–195), whereas only a small amount of

vessels – storage jars, amphorae, cooking pots, jugs, basins, bowls and lamps – were recovered in the latter (Calderon 1999: 135–147). It is unknown whether such a difference reflects the wealth of the monasteries or simply their dissimilar lifestyles. Still, the ceramic vessels indicate some type of connection to the world outside the monastery, because there is no evidence of pottery production inside the monasteries.

Other vessels and tools used in the monasteries were mainly made of glass and metals. Glass was used in lamps and windowpanes in particular. Basic glass was not an expensive material either, because glass windows were widely used even in the modest hermit cells of Southern Sinai (Gorin-Rosen 2000: 240), and glass finds seem to be ubiquitous in all excavations as well. Metal vessels are rare, because these could have been melted for re-use. At Ma'ale Adummin, two bronze jugs were recovered (Magen 1993: 193), while elsewhere the finds are similar to those in Mount Nebo: copper or bronze suspension chains for lamps, weights, bells, plaques, rings, spatulae, and articles of dress; and iron nails, rivets, staples, hooks, knives and ornamental pieces (Saller 1941: 20).

Beside liturgical fitments, monasteries invested in papyri and books. The early Byzantine monasteries were not known as centres of education, but monks were encouraged to study the Bible and other religious writings. In the fifth century, Justinian I regulated that every monastery was to have several bibles so that each monk could read the Holy Scriptures (*Novella* 133.2). It was only after the seventh century Islamic conquest, however, that the monasteries became places where texts were copied and thus preserved to our days (Griffith 1997: 23, 30–31). Yet it is plausible that the monks began to acquire books and manuscripts already during the fourth century, even though there may have been great variation among monasteries. Scholars and learned theologians could have brought their books with them if they became monks. For example, St. Jerome, who translated the Old Testament to Latin,

was such a scholarly monk. In AD 386, he settled in a monastery in Bethlehem and continued his studies until his death AD 420.

Binns has reconstructed the contents of Judaeian Desert monastery libraries based on the writings of Cyril of Scythopolis. He believes that still in the sixth century books were not plentiful or cheap, but Saints' lives and other religious writings were circulating widely all over Palestine. (1996: 57-66.) Also in the Monastery of St. Sergius in Nessana, Kraemer discovered a clear tendency to theological texts in the sixth and seventh centuries (Kraemer 1958: 12). Fragments of religious texts have been preserved in the monastery of Castellion (Israeli and Mevorah 2000: 183). As for the price of the texts, John Moschus narrates an undated anecdote about an anchorite who bought the New Testament for three gold coins around AD 600 (*Pratum spirituale*, 134).

Monasteries were also likely to have archives for keeping record of their business transactions and taxes. The need to document their affairs was pressing in particular if the community owned immovable property. In AD 559, a monastic land sale was registered by tax collectors near Petra (Lehtinen 2000: 95, 137). Monks who were able to write could also record their private affairs, of which we have evidence in the seventh-century Nessana (Kraemer 1958: 6).

8.3 CHARITABLE INSTITUTIONS

Already the first Christians took care of the poor and the deserving, following the example given by the Bible. As Christianity spread, its charitable activities increased as well and in time, the Church and the wealthy Christians founded institutions to help the poor. (Garnsey and Humfress 2001: 123-129.) These charitable institutions included guesthouses, hospitals, poorhouses, old-age homes and orphanages (Jones 1964: 901). The Christians believed that money spent on philanthropy was not wasted, because the interest was later paid in heaven (Laiou 1993: 442).

Monasteries took part in this development as well and the monks would apparently give even their bread away if needed (*Pratum spirituale*, 9). A much more regular distribution of food seems to have taken place as well. At the turn of the seventh century, the majority of the bread baked in the monastery at Choziba was given to the guests and the monks also gave water to travellers (*V. Geor.* 3.23). Thus visitors may have strained the resources of the monasteries, because not all their guests were able to contribute money for their upkeep.

The monks accommodated pilgrims in their guestrooms or hostels, where the visitors were given the same food that the monks ate (*V. Theod.* 17; *V. Geor.* 37) and perhaps medical care as well. Guesthouses were built to accommodate Christian travellers, because non-Christian inns were seen as dens of vice (Wilkinson 1977: 16–18). The literary sources are vague about the definitions of guesthouses and hospitals. Apparently, sometimes guesthouses included a hospital or at least a small infirmary, in other cases they were both independent units. (Miller 1985: 28–29.) The fourth-century traveller Egeria did not describe any monastic guesthouses, but she and her fellow pilgrims did receive hospitality from the monks who lived near holy places. Later on monasteries apparently built guesthouses along their buildings to serve the needs of the travellers. For instance, the Piacenza Pilgrim saw the large Monastery of St. John with its two guesthouses by the river Jordan. (*Anton. Placent. Itin.* 12.) He also saw a monastery in connection with the basilica of Saint Mary in Jerusalem, which had a large congregation of monks, male and female guesthouses, and more than three thousand beds for the sick (*Ibid.*, 23). Also in the sixth century, Cyril of Scythopolis recounted of a monastery in Jerusalem, which had a hospital and a guest-master (*V. Euth.* 48).

Besides building, hagiographic sources reveal how the monasteries bought, sold or exchanged hospices. The monasteries of Euthymius and Theoctistus shared a hospice in Jerusalem, which around AD 485 was transferred to the latter monastery. In return, the monks of the monastery of Euthymius received 200 solidi, with which

they bought their own hospice in Jerusalem. The monastery of Theoctistus received the money for the transaction as a bequest. (*V. Cyr.* 6–7.) Similarly, at the end of the fifth century, Sabas acquired two hospices for the monastery of Kastellion. One was located in Jerusalem and the other in Jericho. (*V. Sab.* 31.) Nonetheless, building or buying a guesthouse was a considerable investment. The other philanthropic institutions – poorhouses, old-age homes and orphanages – did apparently exist in monasteries, but so far their remains have not been identified.

Archaeologically guesthouses are difficult to identify. The contemporary writers did not describe the buildings in any way. Some monasteries probably did not even have separate dwellings for the visitors, but they were accommodated in nearby caves, monks' cells or other available spaces. Thus, the location of the guesthouse may have varied during the time. Hirschfeld postulates that if a guesthouse was built, its probable location was near the main entrance, as the monks wanted to prohibit the wandering of the visitors inside the monasteries (1992: 196–199).

Monastic guesthouses have been tentatively identified in Mount Nebo (Saller 1941: 155–160; Alliata 1990: 464–465) and in Ma'ale Adummin. The latter is a sixth-century building located outside the monastic enclosure. The complex includes a guestroom, a chapel and stables (Magen 1993: 188–189). Furthermore, Forsyth suggests that the eleventh century mosque at the Monastery of St. Catherine was originally a sixth century guesthouse (1968: 7). At Khirbet ed-Deir, Hirschfeld proposes that the guestrooms were located above the gatehouse (1999: 17–24). Excavators have suggested that rooms or entire buildings served as guest quarters in Kursi (Tsaferis 1983: 20), in Kathisma (Testini 1962: 87), and in Tel Masos (Fritz and Kempinski 1983: 145). Preliminary identifications have been made in Deir 'Ain 'Abata (Politis 1995: 477) and in Jabal Harûn (Fiema and Holmgren 2002: 101).

8.4 TAXES

Like all landowners, monasteries were also potential taxpayers. Emperor Constantine gave tax exemptions to the clergy already in the early fourth century (*CI* 1. 3. 2), but as monasticism was taking its first steps during this time period, it is unknown whether this law affected the first monks. However, in AD 370, nuns were exempted from the *capita* tax (*CT* 13. 10. 6). In AD 382, Emperor Gratian freed churches from the duties of furnishing food and transportation to the army or civil service, of delivering grain to the cities, and of providing services for public buildings and fuel for imperial factories (*CT* 11. 16. 15). Around AD 411, Emperor Honorius confirmed that “the land estates consecrated to the heavenly mysteries” are to pay regular taxes only and are hence exempted from menial public service and taxation for road and bridge building (*CT* 16. 2. 40). Yet already in AD 423, some of the menial duties, such as road construction and the care of roads and bridges, are once again imposed upon churches (*CT* 15. 3. 6) and in 441 Emperor Valentinian III cancelled all the tax exemptions that had been given to the clergy in the past (*N Val* 10). Yet only fourteen years later, in AD 451, the previous ecclesiastical privileges granted by orthodox emperors are again confirmed (*CI* 1. 2. 12).

Hence, the obligation to pay extraordinary taxes kept changing from the fourth to the fifth centuries, but apparently the Church and the monasteries paid taxes on their landed property all the time. This practice continued into the sixth century, because in AD 527, an endowed oratory in Pamphylia (Asia Minor) paid taxes (Diehl, E. 1925: no. 23) and it does not appear to be an exceptional ecclesiastical institution. In the sixth century, Justinian I wanted to ease the financial burden of the ecclesiastical institutions and used taxation to achieve this goal. In AD 528, he granted monasteries and other ecclesiastical institutions relief from taxation on gifts and legacies that they received (*CI* 1.2.19). Later in his Edict 131.5, he once again reiterated that lands belonging to religious establishments were not subjected to

“degrading charges and extraordinary tributes”. However, they should have contributed to the repair of roads and bridges.

Apparently, the state legislation governed the taxation of Palestinian monasteries similarly to all other regions. We have no idea of the amount the monasteries needed to pay, as not even a single tax receipt has been preserved. Evidently the Church felt heavily the tax burden, because in AD 511 Sabas travelled to Constantinople to ask Emperor Anastasius for tax relief for Jerusalem (*V. Sab.* 54). The local monasteries may well have been included in this petition, which the emperor incidentally accepted. In AD 530, Sabas revisited Constantinople and this time he asked emperor Justinian for a tax remission to the First and Second Palestine, because of the destruction caused by the Samaritan revolt (*Ibid.* 70). Again the emperor accepted the plea and beside the tax refunds he also gave public funds to rebuild the destroyed sacred buildings (*Ibid.* 73). After Justinian, the legislation does not offer new details concerning monastic taxation and thus arguably Justinian’s legislation prevailed until the Islamic conquest of the region.

9 WEALTH SOURCES AND DISPOSITION – AN ARCHAEOLOGICAL PERSPECTIVE

The archaeological evidence presented in this chapter concentrates on the construction activities at the monastic sites. The building and repair work tangibly demonstrates that the monasteries had wealth in their disposal. However, the origin of the funds often cannot be discerned from the remains. Similarly, it is difficult to estimate, whether the buildings could have been sources of income as well. Obviously, their construction and upkeep drained the funds of the monks or their benefactors. The monks invested their wealth in the buildings and in return received benefits such as shelter and protection.

The construction of monastic buildings and their upkeep required considerable funds, which can be seen in the imperial legislation. In the fifth century, Emperor Leo I ruled that a monastery could be consecrated if it had at least three monks, adequate living quarters for them and property for their support (*NLeo* 14). No strict building regulations, however, seem to have been imposed upon the monasteries until the sixth century, when in AD 528 Justinian fixed a maximum time for erecting a donated church and a hostel. The former should be completed within three years of the donation and the latter within one year. (*CI* 1.3.45.) In his later edict, he extended the construction time of a church to five years, but other religious establishments were still to be built in a year (*Novella* 131.10). Other Justinianic laws concern individual monastic buildings. Thus monasteries were to have common dormitories and refectories (*Novella* 5.3, *Novel* 123.36) and they should be surrounded by strong walls, incorporating one or two guarded entrances. (*Novella* 133.1) Since he also ordered monks and nuns to be segregated in their own monasteries, a need to build new monasteries emerged (*Novella* 123.36).

As such, before Justinian, the building of a monastery was probably guided by the contemporary building traditions and by the funds and the wishes of the

founders. For instance, a characteristic feature in the Judaeen Desert monasteries was a tower, which demarcated the monastic boundaries and may have served as a refuge in times of unrest (Hirschfeld 1992: 171–176). However, the principles that Justinian prescribed seem to have been partially in use before the sixth century as well. For instance, a wall surrounded the monastery at Ma'ale Adummin at the end of the fifth century (Magen 1993: 173–174). In all communities, the church was theoretically the first building to be erected, because otherwise the monks would have to go to the nearest settlement for church services. Other buildings seem to have been constructed concurrently or added later according to the needs and funds of the monks.

9.1 BUILDING PROCESS AND MATERIALS

Initially, the hagiographic sources can also provide information on the actual building process. In the late fifth century, the conversion of the *laura* of Euthymius into a *coenobium* was said to have taken only three years because of the number and the speed of the builders (*V. Euth.* 44). Around the same John the Hesychast, then the guest-master, cooked food for the builders of the *coenobium* in connection of the Great *Laura* (*V. John Hes.* 6–7). These stories indicate that the monks could have used external labour in the construction work. The touch of professional builders is still visible for instance at Khirbet Handuman (Sion 1992: 286) and at Khirbet ed-Deir, where the builders exploited the different qualities of local stones and used the topography to their advantage (Hirschfeld 1999: 11–13).

The builders, however, were not necessarily paid nor professional workforce, because when Euthymius founded a monastery in Caparbaricha, the local villagers built the monastery for him (*V. Euth.* 12). Doubtlessly, the monks took part in the building process as well. When Sabas founded a *coenobium* in Kastellion in AD 492, he built it with the help of the other monks of his *laura* (*V. Sab.* 27). Similarly, monks manufactured building materials. At the turn of the seventh century, at the

monastery of Choziba the monks transported quicklime from the kiln to the pits and then slaked it with water to produce building lime (*V. Geor.* 6.26). The lime was evidently stored inside the monasteries. A room contained a large deposit of building lime in Mount Nebo and in Jabal Harûn (Saller 1941: 144; Frösén *et al.* 2001: 364).

The main building material seems to have been local, as quality building stone was readily available in Palestine (Crowfoot 1941: 102–107). The transportation of building materials by road would also have increased the costs. However, dolomite stone was transported to the site at Khirbet Handumah in the Judaeian Desert, where it was used as the main building material for a small monastery. The exact origin of the stone is not known, but it cannot be found in the neighbourhood. (Sion 1992: 286.) On the other hand, monasteries, which were constructed using local materials include Mount Nebo, Khirbet ed-Deir, St. Catharine, Khirbet Siyar el-Ghanam, Kursi-Gergesa, Deir 'Ain 'Abata, and Bir el-Qutt. In Mount Nebo (Saller 1941: 186–7), the excavators identified quarries in the vicinity of the monastery as sources of stone. Beside new stone, at Bir el-Qutt (Corbo 1955: 114), at Khirbet Siyar el-Ghanam (Corbo 1955: 19), at Ramat Rahel (Testini 1962: 78), and in Jabal Harûn (Fiema and Holmgren 2002: 104) the buildings and materials of the previous settlement were reused as well. At Bir el-Qutt, the excavators further speculate on a more distant origin of some stones: the demolished Constantinian Church of Nativity in Bethlehem (Corbo 1955: 114). The reuse of materials is probable at all sites, where the remains of earlier settlement have been found. Cyril of Scythopolis also vividly describes the reuse of old building materials in the *Life of Sabas*. In AD 492, Sabas founded a coenobium in Kastellion, where he and his monks used material found at the site clearing the debris. They also converted a vaulted room found underneath the debris into a church. (*V. Sab.* 27.)

In Mount Nebo (Saller 1941: 144) and Jabal Harûn (Frösén *et al.* 2001: 364), large deposits of tesserae have been uncovered inside the monasteries, which seem to imply to contemporary repair and building activities. The tesserae were needed to

construct mosaic (*opus tessellatum*) floors, and the stone was usually of local origin (Crowfoot 1941: 103). Beside the material costs, the construction of a mosaic floor was expensive and required professional craftsmen (Ling 1998: 6).

Another decorative material used for the floors was marble. The importation of marble to Palestine reached its peak in the second and third centuries (Fischer 1998: 231). During late antiquity the use of marble in buildings continued, but most of the marble used was *spolia* – reused material from older buildings (Fischer 1998: 268). Yet it was an expensive material and apparently, it was less used in the floors of the monasteries than the mosaics. A marble *opus sectile* pavement has been found at Khan el-Ahmar (Meimaris 1989: 52, figs. 9 and 9a) and a marble slab floor covers the entire church floor at Jabal Harûn (Fiema and Holmgren 2002: 104).

9.2 BUILDING ACTIVITY AT THE MONASTIC SITES

The earliest archaeological traces of possible monastic building activity can be detected in Mount Nebo, where the remains of a fourth-century building have been uncovered in the excavations (Alliata and Bianchi 1998: 151–154). It is not certain, whether there was a coenobitic monastery at the site at this point. The monks who guided Egeria may also have lived in the nearby caves. At Keniset er-Ra'wat near Bethlehem the first monastery was founded sometime between the end of the fourth century and the first half of the fifth century (Corbo 1955: 98).

According to the material evidence, the amount of activity increased in the fifth century. At Mount Nebo, there is now certain evidence of a monastery: a sanctuary, a refectory, a kitchen, and a pantry were erected around an atrium (Alliata and Bianchi 1998: 155–161; Saller 1941: 117–131). The monastery at Ramat Rahel near Bethlehem underwent a transformation, when a church and a monastery were built ca. AD 450, utilising the buildings and water collecting systems of a former legionary camp. The site has been identified as Kathisma, the resting place of Saint Mary. The

remains of the features include a basilica church, a kitchen with a circular bread oven and a double stove, a refectory adjacent to the kitchen, storerooms and a possible guestroom for pilgrims. Whether all these features were built at the same time remains uncertain, because the excavators do not provide any information about changes during the monastic period. (Testini 1962: 73–91.)

During the fifth century, at least thirteen coenobia were founded in the Judaeian Desert alone (Hirschfeld 1990b: 12–34). The laura of Euthymius at Khan el-Ahmar was transformed into a coenobium officially in AD 482 and around this time the ca. 12 m high defensive wall, a church, a refectory under the church, a kitchen and a water reservoir were built (Hirschfeld 1993: 357–361). The nearby monastery of Martyrius at Ma'ale Adummin was founded in the early fifth century, and the original unwallled complex comprised a church and probably some additional buildings. In the late fifth century, a chapel and a narthex were added to the church and in the NW corner, two large stables (18 by 9 m) were built near the main entrance gate. The new dining and cooking area covered an area of 775 m² including a refectory and vestibule with a mosaic floors and a kitchen. Adjacent to this area there was an open courtyard for cooking and a cellar for provisions. Ca. 4–5 m high and 0.7 m thick walls enclosed the entire bulding complex (Magen 1993: 175–189).

In the fifth century, churches, which may have had monks associated with them, were established as well. At Khirbet Siyar el-Ghanam, the first church was built around the turn of the fifth century probably because of the site's holy status as the biblical Shepherd's's Field (Corbo 1955: 22–23). At this early stage, there is no archaeological evidence of monastic activity at the site. Similar activities took place at the nearby Keniset er-Ra'wat, where a church was built in a cave, but there are no signs of the monastery yet. Apparently, the site was visited already in the second half of the fourth century. (Tsaferis 1975: 7–12.) In Kursi-Gergesa by the Sea of Galilee, Tsaferis uncovered a fifth-century basilica church, a crypt and an atrium. During the same time period, also a probable guesthouse and the main gate were constructed,

which indicates that a wall encircled the monastery. (Tsaferis 1983: 5–15; 20.) In southern Palestine at Jabal Harûn, a basilica church was constructed in late fifth century at the site of a previous Nabataean building complex (Fiema and Holmgren 2002: 104). The construction date of the monastic buildings surrounding the church is unknown, but the pottery found at the site indicates Byzantine activity already in the late fourth century (Gerber 2002: 203) and two of the dated layers contain pottery sherds predominantly from the later fifth/early sixth century (Gerber 2000: 410).

In the sixth century, there were at least thirteen new coenobic foundations in the Judaeen Desert (Hirschfeld 1990b: 35–55) and the old monasteries went through alterations and repairs. At Ma'ale Adummin, the monastery was extended to its largest size. A large refectory (26.5 by 12 m), a bathhouse (13 by 9 m) and the chapel of the three priests were erected inside the monastery as well as a group of new mosaic floors, which have been stylistically dated to have been built between AD 550–575. In addition, a hospice (43 by 28 m) was built outside the gate. It comprised eight guestrooms, four stable rooms, and a chapel offering lodging for approx. 60–70 people. (Magen 1993: 173–190.) At Ma'ale Adummin, the enlargement also included a bathhouse, which is the only bathhouse found so far in a Palestinian monastery.¹

One of the new foundations at a remote location was the monastery in Khirbet ed-Deir. This coenobium was built on a cliff side at the turn of the sixth century and it seems to have been the first settlement at the site. The church was built in a cave and other buildings included a refectory and a kitchen, which had a large baking oven, a baking surface and a granary adjacent to the oven. There was also a stable outside the monastic area and possible one inside near the kitchen. The monks lived in a separate living quarters, which have not been excavated. (Hirschfeld 1999: 153–172.) Near the Judaeen Desert at Khirbet Abu Rish (Beit Anun), a new monastic

¹ New excavations in Kursi seem to have revealed a bathhouse in 2001, but no details or date have been published yet. Jerusalem Center for Biblical Studies, at: http://www.bibleinterp.com/excavations/kursi_2001.htm

foundation was established at the site of a fifth-century farmstead, which was specialised in wine production. The conversion to a monastery took place in the late fifth or early sixth century, and pilgrims are now attested at the site. (Magen and Baruch 1997: 354.)

The monasteries near Bethlehem expanded as well. At Khirbet Siyar el-Ghanam, a second church and a new monastery were constructed to replace the old buildings. The buildings included stables, a bakery, a refectory and a kitchen with oven. (Corbo 1955: 19–22; 28–41.) At the nearby Keniset er-Ra'wat the basilica was probably built in the sixth century as well as the monastery (Corbo 1955: 92; Tsaferis 1975: 13). The monastery at Bir el-Qutt was a new foundation as it was constructed between AD 550–600. A wall encircled the complex, which included a church, a refectory, stables, a kitchen, and a bakery. Large wine and oil presses were also found still *in situ*. (Corbo 1955:130.)

In western Samaria a group of five monasteries, Deir Qal'a, Khirbet Deir Sam'an, Khirbet Deir Dakla, Khirbet ed-Deir, and Khirbet Deir 'Arab were evidently founded during the reign of Justinian I. These monasteries are densely located ca. 5 km or less from another. Nearby are located other ruins that may have been monasteries as well. In Deir Qal'a, which is best known of these monasteries, surveyors have identified a church, a tower, a refectory, a water-supply system, and agricultural installations. A massive wall, which has survived to the height of 6.5 m, surrounds the buildings. (Hirschfeld 2002: 155–189.)

In Transjordan near Madaba, the monastery at Mount Nebo reached its maximum area in the sixth century. Two new wings were added to the monastery. The southern group of buildings was presumably reconstructed at the same place following the lines of the earlier buildings. The smallest rooms may have served as individual cells for monks. The installations in the southern wing included a lavatory, three ovens, a basalt millstone, a bakery, and a refectory. (Saller 1941: 164–

186.) The majority of the structures of eastern group were also constructed. They included guestrooms or an infirmary (Alliata 1990: 463–465). At the end of the century, the northern and western group of buildings and the eastern wing outside the main wall were abandoned (Saller 1941: 132, 148; Alliata 1990: 461). However, a new basilica church was constructed to replace the old sanctuary, and the complex also included a baptistery (Alliata and Bianchi 1998: 171–177). Also near Madaba, a new monastic community or at least its church was established in the village of ed-Deir. According to Di Segni, the monastery was probably built on the land of a local aristocrat. (Di Segni 1995: 314–315). Farther up north in the Hauran, the construction history of the local monasteries is unknown, but these are mentioned in a list dated to the second half of the sixth century (Nöldeke 1876: 431–435).

In southern Palestine, St. Catherine's monastery in Sinai was transformed into a walled coenobium by the orders of Justinian, who also funded the remodelling. A basilica church, a hospice, a kitchen, a vault for storage of food and surrounding walls were built. (Forsyth 1968: 3–15.) In the southern end of the Dead Sea, at Deir 'Ain 'Abata, rubbish heaps adjacent to the northern wall of the complex indicate significant activity at the site in the sixth century (Politis 1995: 486–489). The entire pottery evidence at the site indicates that the buildings were constructed and in use between late fourth and seventh centuries AD (Politis 1989: 232).

Modifications of the old monastic buildings are also attested during the politically turbulent seventh century. However, no new foundations are detected in the Judaean Desert (Hirschfeld 1990b). In Ma'ale Adummin, the excavators presume that the monastery was slightly damaged by the AD 614 Persian invasion, but for unknown reasons it was completely abandoned soon after it (Magen 1993: 174). The abandonment of the monastery seems to have occurred suddenly, because of the large amount of finds recovered from the kitchen area, including a cooking pot containing eggshells (Magen 1993: 184). At Kursi, the destruction, possibly related to the events of AD 614 as well, took place at the beginning of the century, and a

rebuilding in a more modest scale followed. The northern wing of the church complex was converted into domestic and industrial purposes, mainly for the production of oil. (Tsaferis 1983: 15–17.) A similar conversion of the buildings to new use took place at Keniset er-Ra'wat near Bethlehem. The atrium was separated from the church and altered into domestic and industrial space for the pressing of grapes and olives. The surroundings of the church were used for living quarters. (Tsaferis 1975: 15.)

In Mount Nebo there is evidence of considerable downsizing as well. Following the construction of the new basilica, the eastern, northern and part of the western wing were completely abandoned. The activities concentrated inside the walls, as also the other buildings around the monastery were deserted. Thus, only the basilica, and the southern and some western rooms remained in use. (Piccirillo 1989: 168.)

As a contrast to downsizing, new building activities and perhaps entirely new foundation occurred as well. At Deir 'Ain 'Abata a new basilica church was constructed in AD 606, possibly on top of an earlier building (Politis 1995: 483–489). Ca. 60 km to the west of Deir 'Ain 'Abata apparently a monastic community was born in Tell Masos in the Negev. The excavated parts contain the remains of a church, a kitchen, two possible guestrooms and five unidentified rooms around a small central courtyard. (Fritz and Kempinski 1983: 138–145.) The excavators estimate that monastery was founded between 650 and 700, as based on the Syriac inscriptions (Fritz and Kempinski 1983), but the pottery indicates an earlier date in the Byzantine period (Figueras 1995: 443–445).

10 MONASTIC ECONOMY IN THE EVOLUTIONARY PERSPECTIVE

In chapters six to nine, I have presented literary and material evidence of how the monasteries gained and used their funds. Now it remains to analyse the information and present the diachronic development of the monastic economy in Palestine from the birth of monasticism to the Islamic conquest. As noted from the evidence, the material is occasionally well dated. However, a part of the sources – both historical and archaeological – cannot or have not been dated. Although the development of monastic livelihoods remains elusive, some principal guidelines of the economic evolution can be discerned.

At first, however, the meaning of “economy” in this study must be clarified. The word economy derives from the ancient Greek *oikos* meaning 'house' and *nemo* meaning 'manage', i.e. managing the house. Ancient economy may be defined as the study of three aspects of a society: (1) producing sufficient amount of food, (2) producing things and (3) moving food and objects from one place to another. The main emphasis of this study has concentrated on the first two, because the research material illuminates more clearly the internal life of a monastery. Nevertheless, details of trade and transportation have also been discussed whenever they are available.

10.1 FOURTH CENTURY

Even though ascetic groups may have lived in communities already during the first, second and third centuries, coenobitic monasticism was born in the fourth century. The first Rules – Basilian and Pachomian – derive from this period of time, and were written for the practical needs of the newly born communities. The secular law also provided monastic communities with the operational preconditions and thus they could organise their communal life more effectively. In other words, Christians had

now attained religious and political freedom and free access to economical resources. In the fourth century, these rights were still occasionally revoked, when the emperors, such as Julian (361–363) were in power. The rights were restored again in AD 370 (CT 16.2.18). In the same year, Emperor Valens (364–378) turned against hermit monks ordering them to return home and fulfil their public duties (CT 12.1.63), but this law did not apply to coenobites. Apparently, together with the writings of Basil and other Church Fathers, this law increased the popularity of the coenobitic way of life.

In the fourth century, monasteries soon began to acquire land from their wealthy benefactors. The donations given by the pilgrims and local people seem to have been sufficient to cover most of the living expenses and charitable enterprises, because there is little evidence of large-scale agricultural ventures. However, it is plausible to believe that the coenobites, like the hermits, practise handicraft and cultivated and/or collected plants to feed themselves and to give food to the pilgrims. This suggestion is supported by Basil of Caesarea's instructions on ascetic life, in which he encouraged monks to work for their living (Saint Basil, Long Rules, 37). The fact that Basil guided the monks in the disposition of their own property when entering a monastery and in the management of donations supports the need to create guidelines for managing the property. In my opinion, it also shows that the monks were extensively dealing with these questions already in the fourth century.

New coenobia were reportedly founded near the holy sites of Palestine, in particular in Jerusalem and Bethlehem. Veneration at many holy sites began as well, which is evidenced at St. Catharine in Sinai, in Mount Nebo, in Keniset er-Rawat, and in Siyar el-Ghanam (see above subchapter 9.2). The eyewitness reports of contemporary writers, such as Egeria, reveal that monks lived even near remote holy places such as St. Catharine in Sinai, but they appear to have been hermits rather than coenobitic monks. So far, no remains of fourth-century coenobia have been identified by archaeological research in Palestine.

10.2 FIFTH CENTURY

In the fifth century, the information about the monasteries significantly increases. In the Council of Chalcedon, the Church regulated that monasteries should be placed under the episcopal control and that the local bishops should accept new foundations. Furthermore, monks were forbidden to engage in business and to manage property, unless they were appointed to the task. They were also forbidden to alienate the monastic property. (Canons 3–4, 24.) This kind of legislation against monks in business suggests that the properties of the monasteries had grown significantly and that the Church leaders, such as Basil of Caesarea in the fourth century, feared the demoralising effect of wealth on monks. The main source of the wealth was still the donations received from the pilgrims, pious devotees and the monks. Now the wealth clearly enabled the construction of new monastic buildings (see above subchapter 9.2).

It appears that the amount of agricultural activities in the monasteries increased in the fifth century. Patlagean suggests that the growth in the number of agricultural monasteries was a general trend in the Roman East, starting between 450 and 470 and that they emerged everywhere where the conditions were favourable. Either the monks cultivated the land themselves or leased it out. (1977: 320.) Archaeologically, the traces of fifth-century agricultural ventures are more difficult to demonstrate and the dated features appear to originate in the sixth century. However, many agricultural features such as the retaining walls in the fields, cisterns and pressing installations are undated. Hence, they might have been in use already in the fifth century, and in the previously settled sites, the monks may have used even older installations and buildings.

The monks may also have found seasonal income from collecting wild plants and working as casual labour at harvest time (subchapters 6.4 and 7.6). This kind of work seems to have helped to support the community for the rest of the year, as the

monks could use the money for acquiring supplies. The collected products could also have been stored for later use. Similarly, they seem to have produced handicrafts such as baskets and ropes wherever the raw materials were available (subchapter 7.4). The earnings from these activities cannot have been substantial enough to allow any large-scale construction activities, but were more likely spent on the basic living needs.

10.3 SIXTH CENTURY

In the sixth century, the Palestinian monasteries seem to have flourished, which is demonstrated by the increase of both the literary and material data. The legal sources are particularly abundant, because Justinian took an active part in the organisation of monasteries. Beside regulating the lives of the monks with new edicts (*Novellae* 5, 67, 79, 123 and 133), he incorporated the first four Ecumenical Councils into the civil law as well (*Novella* 131).

The wealth of the monasteries also is reflected in the stories describing the crimes, which occurred in the communities. For instance, barbarian invaders broke into the cisterns of the monastery of Euthymius and took water (*V. Euth.* 51). Somewhat later, a visitor stole a silver urn from the burial vault of Euthymius, as well as the animals of the monastery (*Ibid.* 59). The danger could be internal as well, because in AD 534 a monk stole 600 solidi from the monastery of Euthymius (*Ibid.* 48) and some years later another monk stole money from the offerings in the same monastery (*Ibid.* 50).

Local and imperial donations to monasteries do not show any signs of decline, at least during the first half of the sixth century. The funds granted by Justinian for the churches and monasteries of Palestine seem to have further increased the construction activities at the old monasteries. The number of new foundations seems to have grown as well, as thirteen new coenobia, such as Khirbet ed-Deir, in the

Judaeen Desert, demonstrate (Hirschfeld 1990b: 81–82). Similar new foundations can be found elsewhere too, such as Bir el-Qutt near Bethlehem. The agricultural livelihood seems to have dominated the economic life in both of these monasteries. At Khirbet ed-Deir, the effective water collecting systems and the large fields point out to large-scale cultivation.

The old monasteries also began the substantial cultivation of crops, as can be seen at Khirbet Siyar el-Ghanam, where wine and olive oil was pressed both inside and outside the monastery. A new church and a monastery were also constructed, which raises the question of the origin of the funds for them. Donations are clearly an option, but the monks may have also acquired money with their large-scale agricultural production, which could have began already earlier. At the new monastery, the collection of rainwater seems to have been a priority. There were also large storerooms for produce.

The old pilgrimage monasteries continued their functioning and these also show signs of expansion (see subchapter 9.2). Thus, both agriculture and pilgrimage appear to have brought wealth to the monasteries during this era.

In the contemporary literature, handicrafts remained the preferred method of monastic livelihood. The production of handicrafts may have greatly varied between the monasteries and the monks may have used it as an additional means of support. The same applies to the use of wild plants, which still may have brought seasonal income and raw materials to the monasteries. As in the previous century, neither of these livelihoods would have created enough income for the large-scale building activities that took place in the monasteries.

10.4 SEVENTH CENTURY

At first, the monasteries probably continued to exist the same way as in the previous century. No new laws affecting the economy of the monasteries were issued after

Justinian until in AD 692 in Trullo, but by then, the Palestinian monasteries lived under the Islamic rule. Throughout the century, the activities at the monastic sites include both the abandonment of old buildings and the construction of new ones (see above subchapter 9.2).

The profound change in the society occurred in AD 614, when the Persians occupied Palestine until AD 628. The Persian wars had raged already in 565–591 and took place again in 603, lasting until 628. Palestine, apparently, had not been directly affected by the fighting during the sixth century. The wars, however, had weakened many other parts of East Roman state by then (Jones 1964: 303–315). According to Anthony of Choziba, the monks of Choziba left the monastery to hide in the desert, or travelled farther to the unoccupied Roman provinces. The Persians imprisoned and killed the captured monks, but after the invasion, the remaining monks returned to their monastery. (*V. Geor.* 31–35.) It seems plausible that similar of events took place also in other monasteries of the occupied areas as well. The excavators have postulated signs of destruction relating to the political events at Kursi-Gergesa and at Ma'ale Adummin (subchapter 9.2).

Many monasteries appear to have continued functioning after the Islamic conquest of Palestine (634–6). It is not known for certain at which period – during the Persian invasion, during the Islamic conquest, or during the later Islamic period – some of the monasteries were abandoned. (Schick 1995: 96–100.) Monastic activities or unidentified habitation continued in Mount Nebo, perhaps until the thirteenth century (Saller 1941: 113), in Khan el-Ahmar until around AD 1250 (Hirshfeld 1993: 353–357), at Kursi-Gergesa until late seventh/early eighth century (Tsaferis 1983: 4), in Jabal Harûn at least until the early eight century (Fiema and Holmgren 2002: 109–110), at Khirbet Siyar el-Ghanam (Corbo 1955: 56) and at Keniset er-Ra'wat (Corbo 1955: 98) around the eight century, and in St. Catharine's monastery until the present day. At Khirbet el-Mird, the abbot corresponded with a Muslim in the eight century

(Grohman 1963: xiii, 55) and at Deir 'Ain 'Abata, a whole new floor of the church was constructed in AD 691 (Politis 1995: 489).

However, probably due to uncertain times, some of the monasteries definitely ceased to exist in the early seventh century. The monastery at Bir el-Qutt went out of use around the time of the Islamic conquest (Corbo 1955: 131). At Khirber ed-Deir, the monks abandoned the site around AD 650 (Hirschfeld 1999: 155), and at Deir Qal'a the abandonment also took place after the Islamic conquest (Hirschfeld 2002: 189).

Thus the archaeological data seems to point out to a partial continuation but also to gradual changes in the material life of the monasteries during the early Islamic period, even though in the event history level the Islamic conquest was a real watershed in the entire region. The decline of the monasteries began when the resources of the Christians grew smaller as the communities shrank in the Islamic period. There was less money for reconstruction as well, when natural phenomena destroyed monasteries. In AD 659, a severe earthquake damaged the monasteries at Khan el-Ahmar and at Qasr Yahud (St. John the Baptist) near River Jordan. The former was partially rebuilt. (Hirschfeld 1993: 353–357) and the latter was still attested functioning AD 724 (Hugoburg, *Life of St. Willibald*, 16). Lacking funds, many other monasteries were probably never rebuilt after such events.

11 CONCLUSIONS

11.1 ECONOMIC BASE OF THE MONASTERIES

Different sources were analysed in this study in order to obtain a reliable picture of the livelihoods in monasteries. Clearly, a multitude of factors was at work simultaneously and I have not been able to include all of these. On Braudel's event level, the actions of individuals – monks, emperors, Church Fathers, pious Christians – and political history can be discerned as powerful factors shaping the development of monasticism. As we have seen, single acts, such as donations, had sometimes an immediate effect on monasticism. Other single events may have had repercussions generations later.

It seems that initially the monastic economy was based on donations and bequests. Particularly the investment on buildings and land required such funds, that the monks could not have earned these by their work. The ascetics were not supposed to work for profit anyway, but just to make enough money to fulfil their basic needs. However, the funds of a monastery may have also come from the monks themselves, if they came from wealthy families. Secular founders endowed monasteries, because they recognised the ideological and religious separation of monasteries from worldly institutions. Thus during the sixth century in particular, monasteries seem to have become favoured recipients of largesse from the rich and powerful.

After the foundation, the monasteries were still dependent on gifts, but in some places, the monks set out to make their living in other ways. If the monastery owned land, the monks could have cultivated plants and bred animals in the same way as the other people in the region. Furthermore, as landowners, the monasteries had legal obligations to pay taxes and extraordinary tributes. So what started as a

legal obligation, may have transformed into a profit-making venture. The large-scale agricultural activities may have created surplus, which then could have been used to acquire supplies that could not be produced at the monastery, or to finance charitable activities. The land and the buildings could also have been leased out to gain funds. Handicrafts may have brought some income as well, but in Palestine, the manufacture of handicrafts did not seem to be sufficient to support entire coenobitic communities.

Although pilgrimage has left discernible material traces in the form of objects and buildings, it is still difficult to estimate its relative proportion as a source of income. Therefore, in the presence of signs of both pilgrimage and industrial or agricultural activities, we may have to conclude that pilgrimage itself was not an adequate source of income. However, in some cases the rules of the community strictly forced the monks to practice agricultural labour as well. Diachronically, the situation could have changed considerably as well even in a single monastery.

11.2 LIFESTYLE OF THE MONKS

The striking feature of the monastic economy is the construction investments and at the same time the humble lifestyle of the monks who lived in voluntary poverty. Undoubtedly, their basic needs could have been satisfied in much less monumental surroundings as well. Despite the ideology of poverty, the ascetics received and used large sums of money, with which they were able to attain better living conditions than was the norm of the society. There is no need to believe that monks lived in luxury, but the case of the monastery at Ma'ale Adummin shows that some communities did not hesitate to use their wealth for their own convenience as well. Nevertheless, the wealth of the monasteries appears to have affected the life of the monks on different levels.

The use of wealth in the monasteries can be observed on three different levels: 1) construction, 2) maintenance of buildings and charities, 3) and everyday existence. The first two levels required large sums of money, which were acquired through donations, bequests, rents, and large-scale agricultural activities. The monks also benefited from money invested into construction and maintenance by getting protection. The construction of religious buildings may have been spiritually rewarding as well, because they were essential for the community as the expression of faith and as places of worship. Similarly, different charities were seen as valuable work by their nature, because it was believed that all charitable activities were later compensated in heaven. However, all charity, small or large, required additional foodstuffs, funds, and maybe auxiliary accommodation as well and thus depleted the monks' resources.

The other side of the monastic life was the natural economy practiced by the monks, who were able to receive/gather/cultivate enough food to satisfy their own personal needs. The hermits, who lived on their own, could follow this kind of lifestyle closely, but the coenobitic monks achieved it as well by dividing the work: they could feed and clothe themselves by collecting and cultivating plants for the common good. The collective living activities, however, created the need to organise the community. As such, legally, a community of coenobitic monks was also seen as a corporation, which was obliged to pay taxes for its property. The taxes to the state and the wish to practise charity were probably the most significant reasons, why the coenobia were not able to support themselves by the means of natural economy. For instance, the taxes needed to be paid whether or not the lands were cultivated.

11.3 IMPACT OF NATURAL AND SOCIAL ENVIRONMENT

The study of monastic economy would not be complete without the estimating the impact of the natural environment and the surrounding society. The ecological conditions and single natural events – earthquakes and droughts – also shaped the

fate of monasteries. Monasticism, however, emerged more as a child of the Late Antique society and Christianity than of the natural environment. It did not find a fertile ground in the Islamic society, even though the environmental settings remained the same.

Although some of the monasteries were located in naturally excellent farming areas such as the environs of Bethlehem, a large number of the monasteries were founded in arid or semi-arid desert environs. There the harsh environment set constraints for the monks. However, the monks also accepted the environmental challenge by settling previously uninhabited sites such as Khirbet ed-Deir.

In constant contact with nature, monks acquired wisdom of previous generations in surviving and making a living in the arid environs. They also learned how to use the local wild plants and animals. It seems that the monks would not let the environment determine their activities, but by experimenting, they managed to change their surroundings and make the desert blossom. Undoubtedly, there were many failures as well, but the religious writings in particular would not reveal or emphasise such happenings. The laws are much more revealing in this case, because the financial troubles are reflected there. For instance, Justinian emphasised in the sixth century that no one was allowed to found a monastery without endowing it, and thus securing its operation in the future. Therefore, it seems that the many a monastic community, which was not endowed with arable land or other profitable property, was not able to function. Sole reliance on pilgrimage and donations may have been enough to support the most popular and famous pilgrimage sites, but other monasteries needed additional income.

The extensive communications system of the region aided the monks to settle even remote sites as well. The transportation of supplies to the monasteries was thus not such a burden and the monks were able to transport their produce to local markets. The effective road network also helped the pilgrims, who were able to visit

sanctuaries near and far. In fact, Hirschfeld's plan of the Judaeen Desert monasteries reveals that none of the monasteries was more than 10 km away from the ancient roads. The monasteries were also strikingly close one another, as the distance to the nearest monastery varies from 1 to 5 kilometres (Hirschfeld 1992: xviii, plan 1). Even though the environs of Jerusalem may have been an exceptional location because of its sanctity, monastic clusters have been found elsewhere as well, for example in Western Samaria.

Beside opportunities created by the environment, however, it seems that human activity was a much more significant force in the development of monasticism. Important factors may have been the population growth, and the ideological and administrative changes. When Christianity became the dominant religion in the Roman society, Palestine with its biblical sites became the centre of religion. The fall of the Western Roman Empire brought new population to Palestine. The number of the local population seems to have grown as well. The effect of the new population is demonstrated in the growth of the urban settlements and in the increasing number of the rural settlements.

Above all, the attitude of the local Christian population was a vital premise for a flourishing community. If the local people were pleased to have ascetics among them, they would have given the money and food. In their minds, a monastic community shared the privileged status of the individual monk. As he was not a part of the ordinary world, neither was his house. The relationship of the monasteries to their nearby settlements seems largely to have been economically reciprocal as well. The best evidence for this can be seen in the fate of the monasteries after the Persian invasion and the Islamic conquest. At least initially, the Christian monasteries and settlements continued to exist without great disturbances. The change, as it came, was gradual and affected the entire population. Only then most of the monasteries ceased to exist, because their social surroundings had changed. The number of new ascetics must have been smaller by now, but also the economic relationships with the

settlements worked now on a different basis. Furthermore, the monasteries were obliged to pay full taxes that were required from non-Muslims. The amount of donations and bequests declined as the number of local Christians and pilgrims decreased as well. Probably the pilgrims concentrated their visits to the most famous holy sites and thus the less important sanctuaries were no longer visited. Local short-distance pilgrimage may have continued as long as there were Christian settlers in the vicinity.

Overall, it seems that monasteries were adaptable to many economic and cultural environments. Beside Palestine, new monasteries sprang up in all the parts of the Christian world even as far as in northern England, and they seem to have equally thrived in towns and in countryside. However, I have not discerned a uniform coenobitic movement, but rather a new way of life, which was still shaping its internal form, while at the same time it sought its place in the secular society. Therefore, the economy and livelihoods of the monasteries are not uniform either, but rather show how different communities adjusted to their specific natural and social environment within the limits of their ascetic religious principles. The separation from the surrounding society was not easily achieved, because the secular laws still tied the ascetics to their families and other civic activities. Similarly, the management of the financial affairs of the community tied the monks to the contemporary society as well, which may have made the monks forgetful of their ideals. Yet in the Byzantine era, the monastic way of life was conceived as the perfect one, and in the eyes of the contemporary people, the society was seen as rightfully divided between those who had renounced the world and those who were part of it.

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ABBREVIATIONS:

Anton. Placent. Itin. = Antoninus Placentinus, *Itinerarium*.

CI = *Codex Iustinianus*

CT = *Codex Theodosianus*

Evagr., HE = Evagrius, *Historia Ecclesiastica*

It. Eg. = Egeria, *Itinerarium Egeriae*.

Jer., Epist 108 = Jerome, *Epistula 108*

Jer., V. Hil. = Jerome, *Vita Hilarionis*

John of Eph., Lives = John of Ephesus, *Lives of the Eastern Saints*

LNMarc = The Novels of the Sainted Marcian Augustus

Miracula = Anthony of Choziba, *Miracula beatae virginis Mariae in Choziba*

NLeo = New constitutions of Emperor Leo

NVal = The Novels of the Sainted Valentinian Augustus

P.Ness. = Kraemer, 1958. Excavations at Nessana. Vol 3.

Pratum spirituale = John Moschos, *Pratum spirituale*

Theod., De situ = Theodosius, *De situ terrae sanctae*

V. Cyr. = Cyril of Scythopolis, *Vita Cyriaci*

V. Euth. = Cyril of Scythopolis, *Vita Euthymii*

V. Geor. = Anthony of Choziba, *Vita Georgi*

V. Ger = Anonymous, *Vita Gerasimi*

V. John Hes. = Cyril of Scythopolis, *Vita Johanni Hesychastae*

V. Mar. Aeg. = *Vita sanctae Mariae Aegyptiacae*

V. Mel. = *Vita S. Melaniae Junioris*

V. Sab. = Cyril of Scythopolis, *Vita Sabae*

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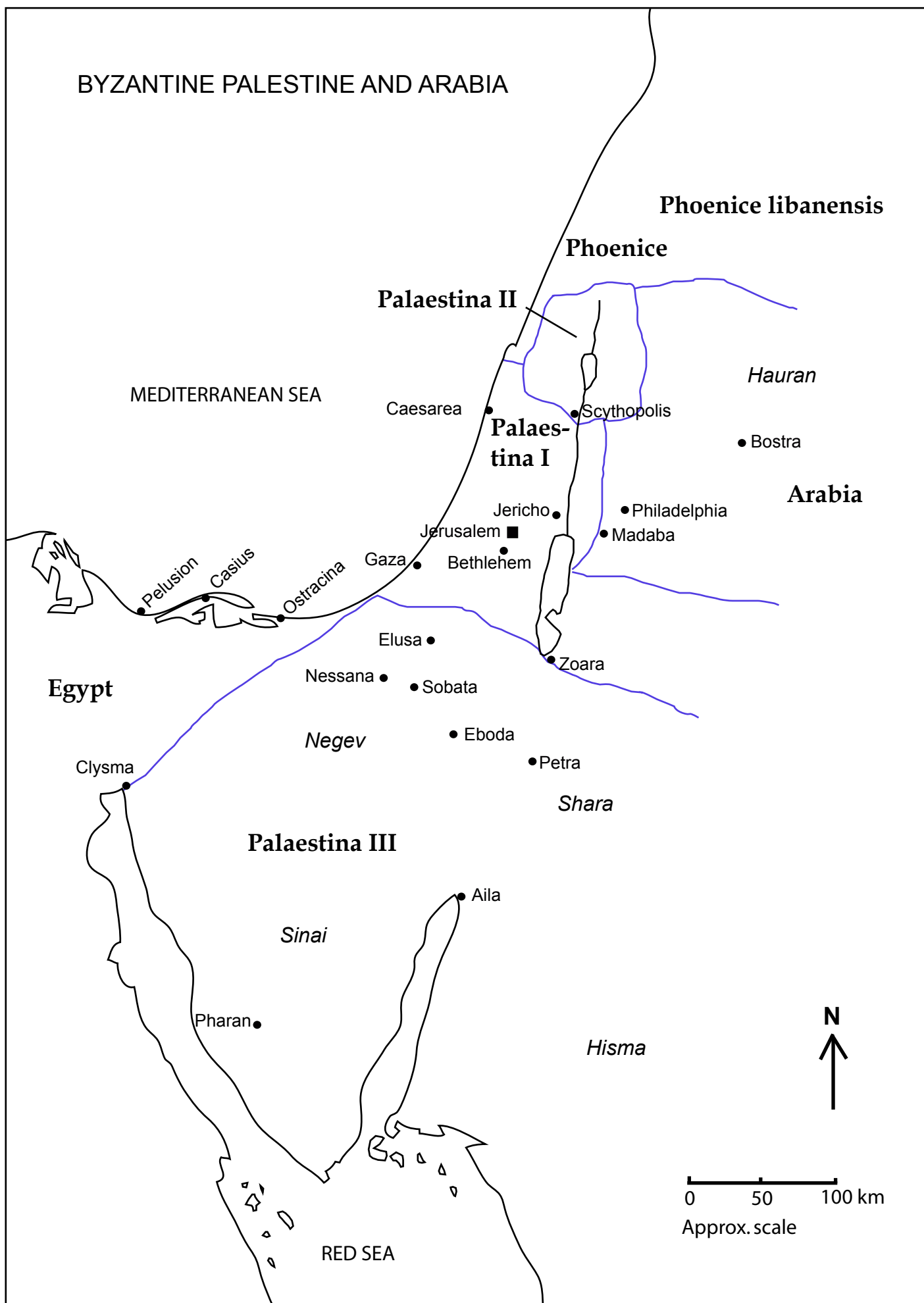
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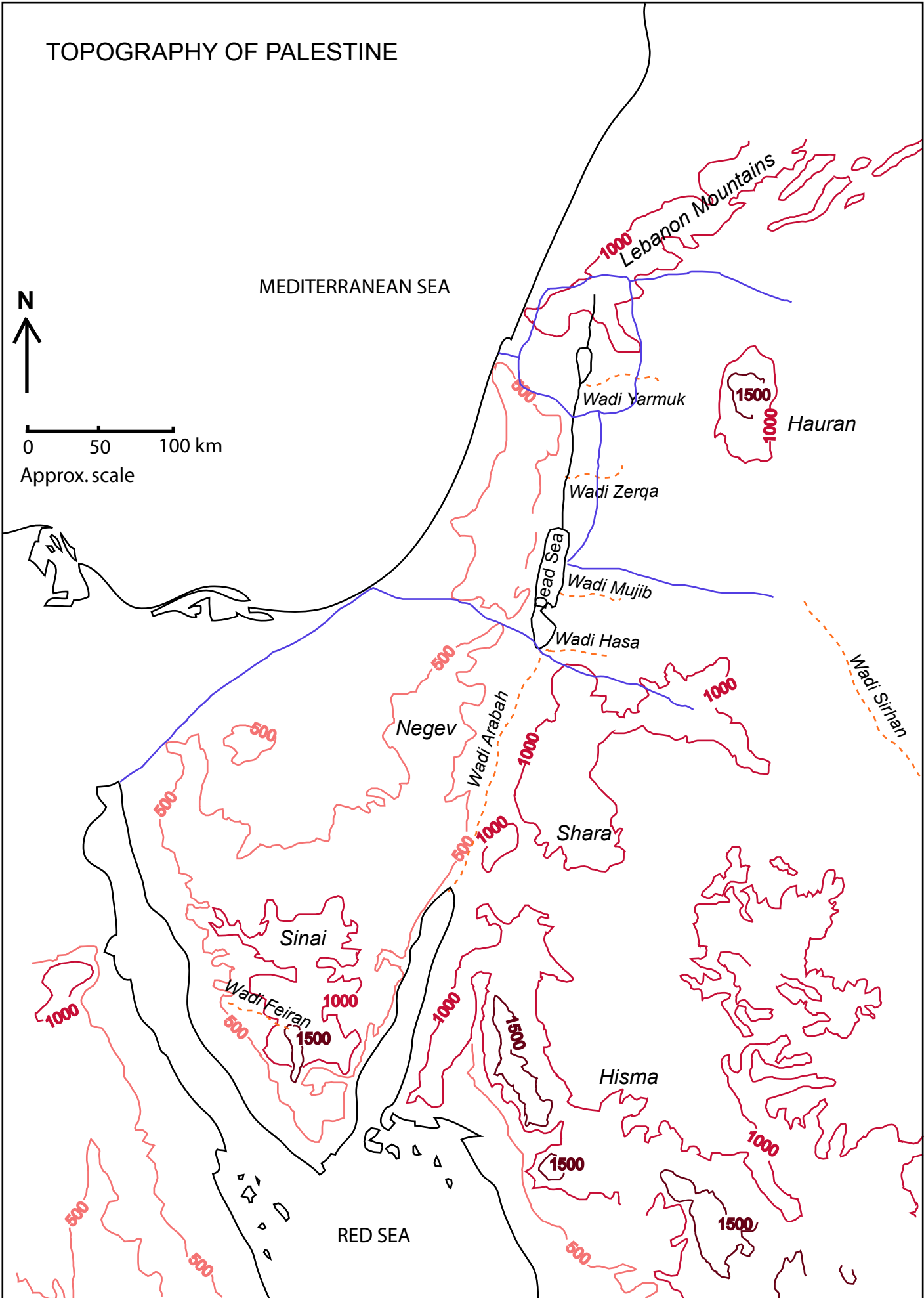
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Appendix 1. Byzantine Palestine and Arabia

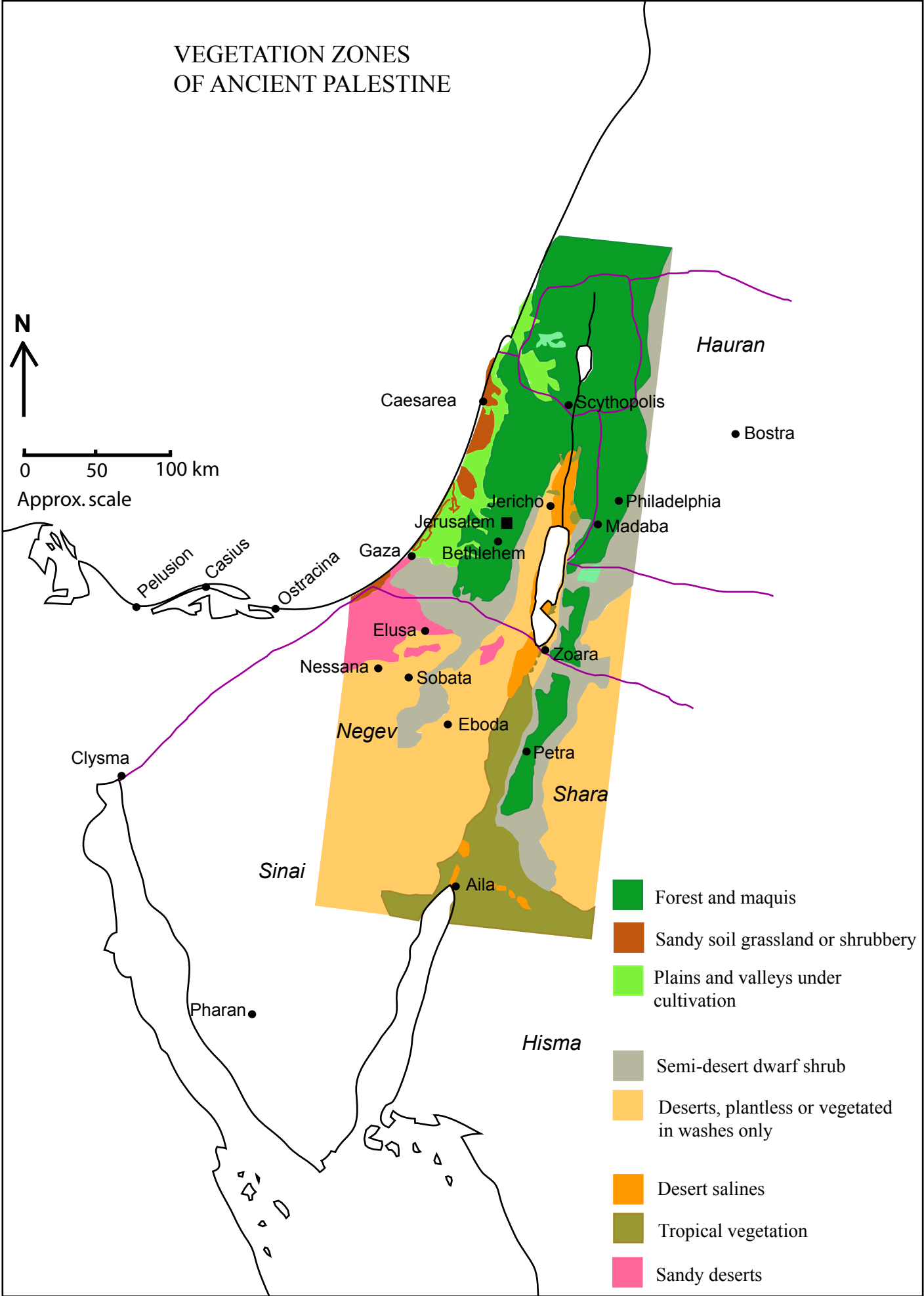




Source: Bowersock 1982. (Elevations).

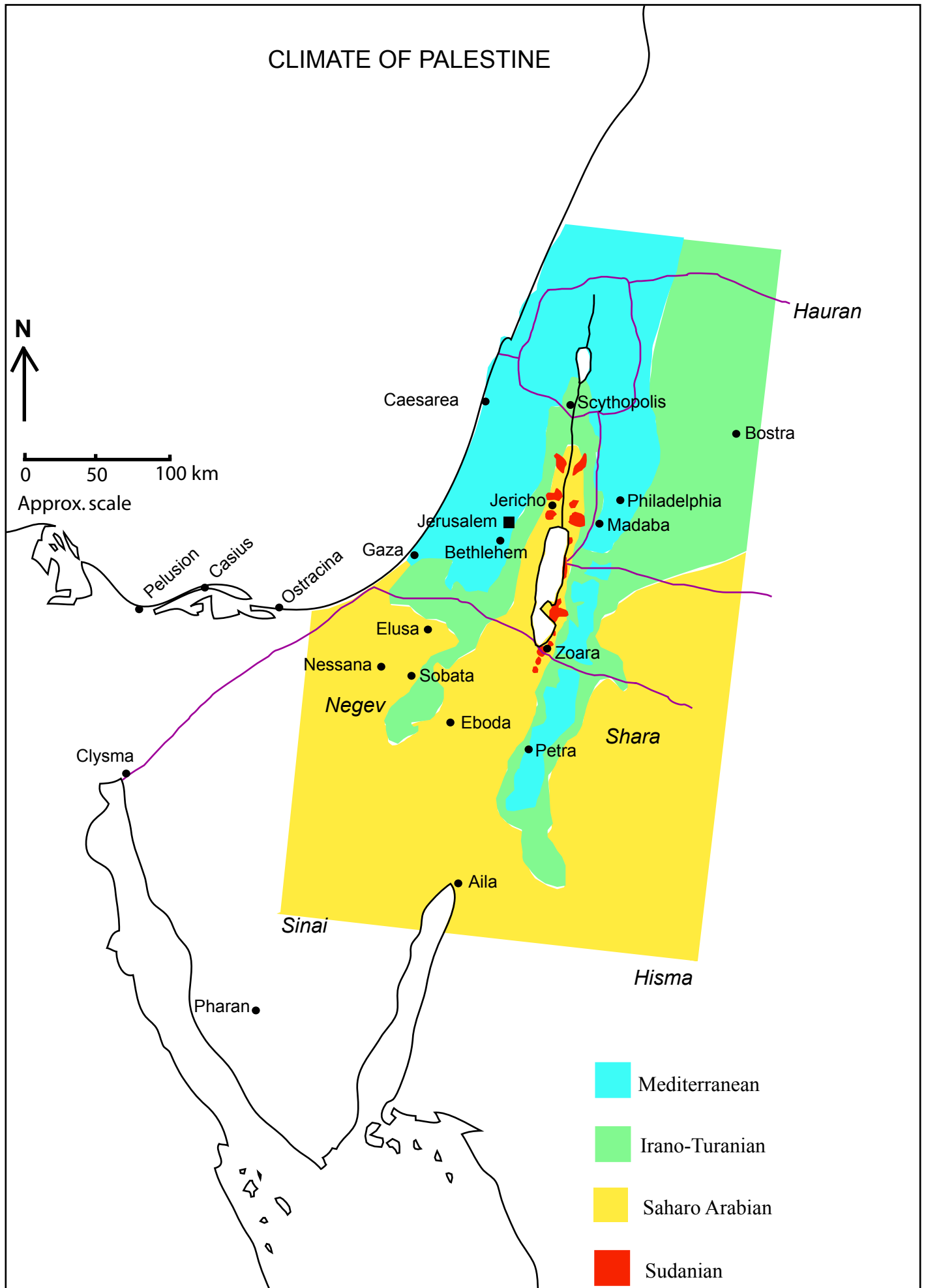
Elevation in meters

Appendix 3. Vegetation Zones of Ancient Palestine



Source: Zohary 1982.

Appendix 4. The Climate of Palestine



Source: Zohary 1982.

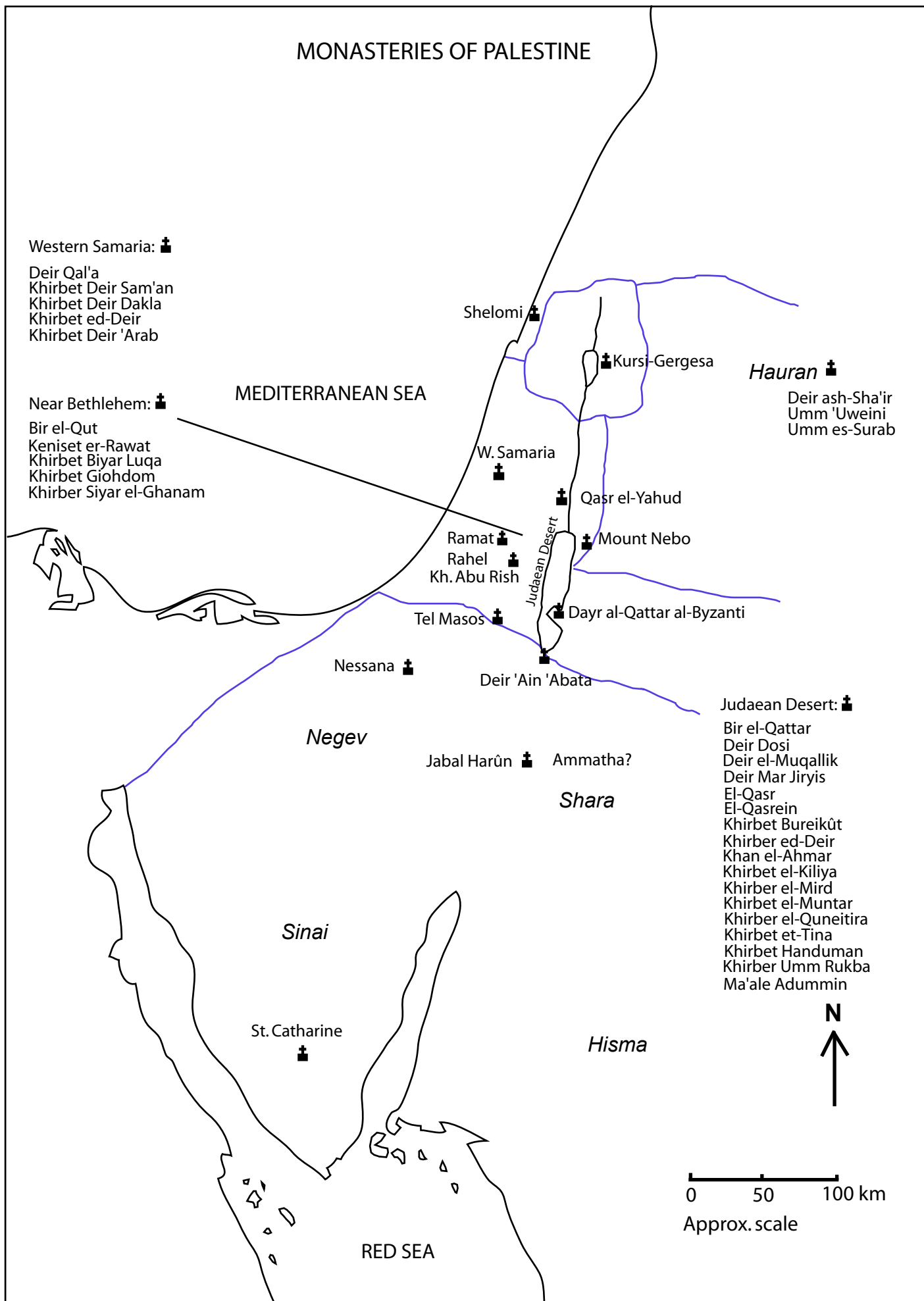
**YEARLY PRECIPITATION
IN MODERN PALESTINE**

This map illustrates the distribution of annual precipitation across the region of modern Palestine and its immediate surroundings. The map includes the following features:

- Geographical Labels:** The regions of *Hauran*, *Negev*, *Sinai*, *Shara*, and *Hisma* are labeled in italics.
- Precipitation Contours:** Blue lines represent isohyets (lines of equal precipitation) with values ranging from 50 to 600 mm. Key contour values include 50, 100, 150, 200, 250, 300, 400, 500, and 600 mm.
- Regional Boundaries:** A thick magenta line delineates the boundaries of the study area, while a black line outlines the modern state of Palestine.
- Scale and Orientation:** A north arrow is located in the upper left corner. Below it, a scale bar indicates distances of 0, 50, and 100 km, with the text "Approx. scale" underneath.
- Topography:** The map uses contour lines to represent elevation, showing higher precipitation levels in the mountainous regions of the north and west, and lower levels in the arid Negev and Sinai deserts.

Source: Niemi and Smith 1999.

Appendix 6. Monasteries of Palestine



Source: Various sources.